



United Nations Development Programme

Country: Egypt
PROJECT DOCUMENT<sup>1</sup>

Project Title: Improving the energy efficiency of lighting and other building appliances

UNDAF Outcome(s): Regional human development disparities are reduced, including reducing the gender gap, and environmental sustainability improved

UNDP Strategic Plan Environment and Sustainable Development Primary Outcome: Mainstreaming environment and energy: Strengthened national capacities to mainstream environment and energy concerns into national development plans and implementation systems.

UNDP Strategic Plan Secondary Outcome: Catalyzing environmental finance: Countries develop and use market mechanisms to support environmental management.

Expected CP Outcome(s): Sustainable management of environment and natural resource incorporated into poverty reduction strategies/key national development frameworks and sector strategies.

Expected CPAP Output(s): Access to cleaner energy services and low-emissions technology including renewable energy, energy efficiency and/or advanced fossil fuel technologies promoted

Executing Entity/Implementing Partner: Ministry of Electricity and Energy

Implementing Entity/Responsible Partners: Egyptian Electricity Holding Company

Brief Description

The objective of the project is to facilitate a comprehensive market transformation of the Egyptian market towards the use of more energy efficient electrical appliances at a level where cost-efficiency is proven. This is envisaged to be achieved through the combination of regulatory tools such as minimum energy performance standards (MEPS) and information labels, enhanced public awareness, capacity building and attractive financing mechanisms. The project will strengthen the regulatory and institutional framework, develop monitoring and enforcement mechanisms, and provide training to public authorities and other relevant stakeholders. It will explore and test different financial incentives complemented by extensive public outreach campaigns.

Table with 2 columns: Programme Period, Atlas Award ID, Project ID, PIMS #, Start date, End Date, Management Arrangements, PAC Meeting Date, Total resources required, Total allocated resources, Regular, Other (GEF, Government, Gov. Parallel+ In-kind, Other parallel+ in-kind), In-kind contributions.

Agreed by: Name/Title, Signature/Date
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1 For UNDP supported GEF-funded projects, as this includes GEF-specific requirements

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## List of acronyms

CFL	Compact Fluorescent Lamp
CO	UNDP Country Office
CO <sub>2</sub>	Carbon dioxide
EE	Energy Efficiency
EEAA	Egyptian Environmental Affairs Agency
EEHC	Egyptian Electricity Holding Company
EEIGGR	UNEP/GEF Energy Efficiency Improvement and Greenhouse Gas Reduction Project
EEUCPRA	Electric Utility and Consumer Protection Regulatory Agency
EFI	Egyptian Federation of Industry
EU	European Union
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GLS	Incandescent Light Bulbs (General Lighting Service)
HID	High-intensity Discharge Lamps (such as mercury vapor, sodium and metal halide lamps)
HQ	UNDP Headquarters
ICT	Information and Communication Technology
JCEE	The Egyptian German Joint Committee on Renewable Energy, Energy Efficiency and Environmental Protection
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
LFL	Linear Fluorescent Lamp
MEPS	Minimum Energy Performance Standards
M&E	Monitoring and Evaluation
MoEE	Ministry of Electricity and Energy
MoFA	Ministry of Foreign Affairs
MoTI	Ministry of Trade and Industry
NGO	Non-Governmental Organisation
NREA	New and Renewable Energy Authority
QPR	Quarterly Progress Report
PIR	Project Implementation Review
PMU	Project Management Unit
PPG	Project Preparation Grant
PSC	Project Steering Committee
RCU	UNDP Regional Coordination Unit
RTA	Regional Technical Adviser
S&L	Standards and Labels
TPR	Tripartite Review
TTR	Terminal Tripartite Review
TWh	Terawatt hour
UEC	Unit Energy Consumption
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

## 1. SITUATION ANALYSIS

### 1.1 Context and global significance

1. The energy sector plays a vital role in Egypt's economy. The Government faces a difficult strategic choice between satisfying the increasing national primary energy demand (94% dependent on oil and gas and which is being offered to end-users at subsidized prices) and maintaining a certain level of hard currency revenues from oil and gas exports at world prices, even with a growing risk of accelerated depletion of national proven reserves. In 2008, the Government announced that it would not sign any new gas export contracts in 2010 due to the need to accommodate growing domestic consumption.

2. Electricity consumption has increased rapidly from about 49 TWh in 1996/97 to over 111 TWh in 2008/2009. With the current growth rate of more than 7% per year, Egypt would need to double its current power generation capacity of 23,502 MW<sup>2</sup> by 2020. Although Egypt has traditionally used large amounts of hydropower to generate electricity, over 85% of the electricity currently originates from fossil sources, primarily natural gas. This share is likely to increase further in the future due to continuing high rates of demand growth.

3. The energy-related GHG emissions of Egypt were estimated at 168.7 Mtonnes of CO<sub>2eq</sub> in 2007 (IEA Key World Energy Statistics 2009), thereby making Egypt the 14<sup>th</sup> largest source of CO<sub>2</sub> emissions among all GEF program countries. Thus, any successful energy efficiency market transformation activities in Egypt will also have a significant impact in reducing GHG emissions in the global context.

4. According to the latest available statistics of 2008/2009<sup>3</sup>, the residential sector accounts for 39.2 % of total electricity consumption, while commercial buildings contribute to 7.8% of the demand and public entities 5.1%. Together, the electricity consumption of the building appliances in these three sectors represents approximately 50% of the total electricity consumption of the three sectors. Street lighting accounts for an additional 6.2%. While the Government has increased electricity tariffs and is well aware of the necessity of doing this, the Egyptian population has until now been able to enjoy highly subsidized energy prices, which have not encouraged energy saving. The situation has started to change, however.

### 1.2 Current energy policy to address the root causes and threats

5. Egypt's national power sector strategy (source: [www.moee.gov.eg](http://www.moee.gov.eg)) includes the following targets:

- to optimize the use of available energy resources and minimize environmental pollution;
- to provide electricity at minimum price and best quality;
- to restructure the electricity sector to optimize investments and improve electrical services;
- to utilize modern and sophisticated technical systems in the electricity sector's operation and activities; and
- to develop the expertise and skills of engineers and technicians working in the electricity sector.

6. A cornerstone for the discussion on energy efficiency was the speech of President Mubarak in October 2007, in which he set a target to save 20% of today's consumption by 2020. This was the first time that energy efficiency gained such a prominent role, with the formulation of a quantitative target at the highest political level. Consequently, the long-term work on energy efficiency supported by UNDP and GEF in Egypt has gained increasing attention among key policy makers and in public discussion. This is creating a very attractive environment for expanding the GEF activities with an objective of achieving a sustainable market transformation in favor of more energy efficient building appliances.

7. The energy sector in Egypt is facing a number of challenges that must be addressed to maximize its contribution to the development process. Large capital investments are required for securing adequate and reliable supply of energy, while at the same time subsidized energy prices remain a burden to the

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<sup>2</sup> As of June 30, 2009

<sup>3</sup> EEHC Annual Report, 2008/2009



state budget. The total costs of energy subsidies to the state have been estimated as being close to US\$11.45 billion in 2009, which is about 67% of the estimated total cost of subsidies of US\$17.1 billion (source: Ministry of Economic Development). Furthermore, subsidized energy prices are disincentivizing efficient energy use and can also distort prices in the manufacturing sector.

8. On the other hand, in Egypt as well as in other developing countries, tariff reform cannot be designed only on the basis of full cost recovery, but also has to factor in social considerations. The costs of meeting the basic energy needs of the disadvantaged and most vulnerable groups of the population cannot exceed their capacity to pay. As such, the need for some cross-subsidization may remain or there is a need to keep the electricity bill affordable by other means, including improved energy efficiency.

9. The Government has started to take steps to tackle the listed energy sector challenges. Energy prices are sought to be rationalized to better reflect the cost of supply and international market prices. While the original plan was to phase out subsidies for electricity and gasoline completely by 2014 and continue them only for butane, the global financial crisis that emerged in 2008-2009 has postponed this schedule. Effective steps were taken by the Ministry of Electricity and Energy for gradual phase out of subsidies for electricity in the years 2006, 2007 and 2008, but the process was slowed down in 2009. Restart may be seen in 2010, however.

10. The current electricity tariffs for different consumer groups are presented at the website [http://www.egyptera.com/en/Bill\\_Tariffs.htm](http://www.egyptera.com/en/Bill_Tariffs.htm), while the EEHC long run marginal costs of electricity generation, transmission and distribution have been estimated as being 7.5 US cents per kWh<sup>4</sup>. By using this figure, it is relatively easy to conduct a rough assessment of the extent to which different energy efficiency investments would be worth supporting by the Government of Egypt (per saved kWh), while not increasing the total net costs to the state budget.

11. The highest subsidy is currently within the residential tariff, which is why the energy savings in this sector should generate the highest returns to the state budget. This does not take into account the non-payment problem with some customer groups, however, which is why the screening of sectors with the highest cost saving potential to the Government may not directly correlate with the approved tariff levels.

### **1.3 Barriers and project baseline**

12. Lighting accounts for over 20% of Egypt's total electricity consumption. On the basis of the market assessment conducted during the PPG phase, it is estimated that about 260 million lamps will be sold in Egypt in 2010 (excluding street lighting). Of this, linear fluorescent lamps (LFLs) are estimated to account for about 35 million units (13%) and CFLs for about 17 million (7%). The remainder are primarily incandescent light bulbs (GLS).

13. The current annual growth rate of new subscribers for electricity is about 5%, which can be transferred to the annual growth of the total lighting market – taking into account, however, that the replacement rate of new lighting products such as CFLs is typically considerably lower than that of incandescent light bulbs. Further assumptions in this regard are presented in the greenhouse gas reduction analysis of the project (please see Annex 7-4).

14. The principal barriers to increasing the market penetration of energy efficient lighting in Egypt are: i) low awareness by consumers and, to some extent, retailers concerning the benefits of energy efficient lighting; ii) lack of experience, and in some cases trust, of the targeted consumers regarding the performance and quality of new lighting products; and iii) usually higher upfront costs of energy efficient lighting compared to the alternatives with lower efficiency.

15. The previous UNDP/GEF “Energy Efficiency Improvement & Greenhouse Gas Reduction (EEIGGR)” project has already demonstrated the technical and financial feasibility of using both CFLs and electronic ballasts by supporting demonstration applications in some offices of the MoEE, distribution companies and public lighting. Furthermore, the joint actions and support schemes initiated with the Ministry of

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<sup>4</sup> Source: consultations with EEUCPRA in May 2010.

Electricity and Energy have supported local manufacturing and the establishment of the initial market of CFLs, which by the end of 2010 is expected to reach 17 million units sold annually (compared to less than 0.5 million in 2000). The new project will build on the results of this previous project by addressing the remaining barriers to complete the market transformation. For further details, please see Section 2, "Project Strategy".

16. With regard to other household appliances, minimum energy performance standards and/or energy efficiency labeling schemes have so far been developed and formally adopted for 5 product groups, namely CFLs, refrigerators and freezers, washing machines, air-conditioners and electric water heaters.

17. The development of the standards and labels has followed international recommendations, and the test standards and the energy performance measuring methodology have been brought into line with those of the European Union, the trading bloc that is most relevant to Egypt. The evaluation and the review done during the preparation (PPG) phase of this project also identified, however, some serious gaps and weaknesses in the actual implementation, enforcement and monitoring of the impact of the schemes, which should receive due attention during further work. One of these gaps is that the submission of products for testing is obligatory for imported products only, which leaves the extensive domestic production sector free of any legal obligations. Nor has any systematic market monitoring or inspection of retail stores yet been organized.

18. Verification and enforcement of appliance energy declarations and label presence in shops is essential for credible implementation and the sustained CO<sub>2</sub> impact of appliance standards and labels. The result of unstructured verification and enforcement is less effective market transformation, loss of consumer confidence in the scheme, waste of public resources and a lower energy efficiency and CO<sub>2</sub> reduction impact. Experiences from other projects, such as the UNDP/GEF S&L project implemented in Tunisia (PIMS 993: "Barrier Removal to Encourage & Secure Implementation of Standards and Labeling of Cold Appliances and Transformation of the Cold Appliance Market"), have demonstrated that the additional financial resources invested at the beginning of the programme to set up a coherent and efficient verification and enforcement scheme ensure that market parties take stock and make sure that their products comply with the regulations. While some mechanisms and activities for market surveillance and inspection of products have been introduced in Egypt, they cannot yet be considered as adequate. For further details, please see the chapter "Project Objective, Outcomes and Outputs/Activities" in the "Project Strategy" section of this project document.

#### **1.4 Stakeholder Analysis**

19. The Supreme Energy Council (SEC) is the highest forum for energy policy in the country: it decides on national energy strategies and policies, including consideration of demand-side efficiency, incentives for renewable energy, private sector investment in energy services and revised energy prices for large industrial facilities and other end-users. The SEC is chaired by the Prime Minister and includes Ministers of Defence, Finance, Petroleum, Electricity, Economic Development, Trade and Industry, Environment, Investment, Housing and Foreign Affairs as its members.

20. The Ministry of Electricity and Energy (MoEE) is responsible for power generation, transmission and distribution through its executing arm, the state-owned Egyptian Electricity Holding Company (EEHC). In its current structure, EEHC has sixteen affiliated companies (six in production, one in transmission and nine in distribution), while EEHC coordinates between the companies as an Integrated Economic Unit that can finance their investment plans.

21. The MoEE and EEHC were the main Government counterparts for the previous UNDP/GEF EEIGGR project and are expected to continue in that role for this new project. Besides overall project management, the distribution companies under the EEHC have been implementing energy audits and specific promotional programmes for CFLs and are expected to continue with such activities.

22. The Electric Utility and Consumer Protection Regulatory Agency (EEUCPRA), affiliated with the MoEE, is regulating, supervising and controlling all matters related to electricity generation, transmission, distribution and consumption in Egypt with the aim of ensuring the availability and continuity of supply and

satisfying environmental protection, the interests of the electric power consumers as well as the interest of the producers, transmitters and distributors.

23. The New and Renewable Energy Authority (NREA), under the auspices of the MoEE, serves as the focal point for expanding the use of renewable sources of energy in Egypt and is implementing projects involving the use of wind energy, solar energy and biofuels. NREA also has a well-equipped testing laboratory for those electric appliances that are subject to the existing S&L regulations and will be one of the main beneficiaries of this new project as it applies to any testing-related activities.

24. The Ministry of Trade and Industry and its underlying and affiliated agencies (see below) are obvious project counterparts to discuss any activities associated with local industrial development and international trade.

25. The Egyptian Organization for Standards and Quality (EOS) will be a key project partner and Government counterpart for the introduction of new standards and certification schemes. EOS engineers are also currently in charge of selecting the samples for testing from each imported batch of those building appliances that are subject to mandatory S&L schemes.

26. The Egyptian Accreditation Council under the auspices of the Ministry of Trade and Industry is responsible for accrediting the local testing laboratories.

27. The General Organization for Export, Import and Control, the General Organization for Standardization and the Egyptian Federation of Industries and the Industrial Control Authority are responsible for inspection of imported and locally manufactured equipment and check the presence of labels as well as compliance with the developed energy efficiency specifications.

28. The Egypt Industrial Modernization Center (IMC) was established in 2000 as an independent body to implement and coordinate the modernization of Egyptian industry under the Industrial Modernization Programme (IMP), jointly funded by the EU, the Government of Egypt and the Egyptian private sector. Further co-operation possibilities in supporting local industry to transform local manufacturing facilities to produce more energy efficient appliances can be explored during the implementation of the project. IMC also collects and stores data on different industrial activities and is implementing specific energy efficiency programmes, including free “walk-through” energy audits and financial incentives for follow-up EE investments in different industrial facilities. Further co-operation possibilities in this area can be explored during implementation.

29. The Egyptian Ministry of Finance (MoF) plans, prepares and manages the national budget and public debt. As a part of its role, the MoF analyses and designs tax policies, customs duties and tariff policies and other types of public income. It also monitors macroeconomic, macro-fiscal and financial developments in order to provide policy advice on a wide range of economic issues. As such, the MoF can be considered as one of the key project counterparts with regard to any financial matters. The Egyptian Customs Authority works under the auspices of the MoF.

30. The Ministry of State for Environmental Affairs (MSEA) – through its executing entity, the Egyptian Environmental Affairs Authority (EEAA) – hosts the Climate Change National Focal Point, who coordinates climate change activities at the national level. The Minister of Environment is the Chair of the National Climate Change Committee, which reports to the Prime Minister on coordination among the relevant ministries on climate change mitigation and adaptation.

31. The Egyptian Federation of Industry represents the local manufacturing industry.

## 2. PROJECT STRATEGY

32. By building on the groundwork of the previous UNDP/GEF EEIGRR project, this new project will focus on two areas that have already shown signs of success, namely energy efficient lighting and appliance energy efficiency standards and labels. While the EEIGRR project introduced CFL support and appliance S&L schemes for the Egyptian market, it did not have the resources to facilitate a more comprehensive market transformation.

33. For the lighting component, there is a need to expand the activities of the previous project by: i) building consumers' confidence on the quality and cost saving opportunities of CFLs and other energy efficient lighting products (including street lighting); ii) to support the Government of Egypt in strengthening the legal and/or regulatory framework for promoting energy efficient lighting; iii) ensuring that the performance and quality of these products can meet consumers' expectations; and iv) continuing the development and implementation of attractive financing schemes to overcome the identified financing barriers.

34. For other appliance standards and labels, there is a need to expand the S&L schemes for a larger number of appliances and to strengthen the actual implementation and enforcement of those already developed and those to be developed under the proposed project. In addition, there is a need to establish an institutional framework and mechanisms for continuing market monitoring and regular review and updating of the adopted standards and labeling schemes.

35. Ultimately, the energy efficiency requirements for both the lighting and other electric appliances sold in the Egyptian market are sought to be made fully aligned with the requirements of the EU market. For further details, see Annexes 7-4, 7-5 and 7-6.

36. For public awareness raising (as a cross-cutting area), a major integrated campaign will be implemented addressing, among others, the following aspects:

- sufficient funding to reach visibility and test innovative approaches;
- segmentation of target groups;
- taking stock of the experiences, prepared materials and lessons from other countries that have implemented similar campaigns, such as Tunisia, Lebanon and Jordan;
- blending general awareness raising with specific technologies and programmes/campaigns; and
- establishment of a website, hot line and info point to take up further inquiries, which can later be managed by the energy efficiency agency that is planned to be established by the Government of Egypt and/or an entity dealing with consumer awareness raising or protection in general.

37. Close co-operation with the private sector is recognized as an essential part of the effort. By building on the partnerships initiated during the previous UNDP/GEF EEIGRR project, the project seeks to strengthen and expand cooperation with local manufacturers, importers and other supply chain entities in implementing the project activities and supporting market transformation. In doing so, the project is also trying to ensure that i) there will be a rational balance of obligations on each party, ii) the timing of measures will allow for a reasonable return on investment within normal product cycles; and iii) the threshold values and standards will not cause unjustified discrimination against any local or imported product.

38. All of these activities will be supported by the current efforts of the Government to gradually increase end-use energy prices, thereby creating a more attractive environment for all energy efficiency investments.

39. The project strategy is presented by a logical framework approach. The essence of this approach is that outputs are clustered by outcomes, which together will achieve the project objective. These are discussed briefly below with further details in Section 3, "Project Results Framework".



## 2.1 Project objective, outcomes and outputs/activities

40. The objective of the project is to improve the energy efficiency of end-use equipment, specifically building appliances and lighting systems manufactured, marketed and used in Egypt. This is envisaged to be achieved through a combination of regulatory tools such as minimum energy performance standards and information labels, enhanced public awareness, capacity building and innovative and attractive financing mechanisms. The project will strengthen the regulatory and institutional framework, develop monitoring and enforcement mechanisms, and provide training to public authorities, appliance professionals, energy suppliers and other relevant stakeholders. It will also explore and test different financial incentives complemented by extensive public outreach campaigns.

### Outcome 1: Accelerated growth of the EE Lighting Market in Egypt, in line with the Global UNEP-UNDP EE Lighting Initiative.

41. The target for this outcome is that energy efficient lighting products such as CFLs, LED lamps and energy-efficient linear fluorescent lamps with electronic ballast will become the first choice for residential, commercial and administrative buildings, while energy-efficient sodium lamps and other high intensity discharge (HID) lamp options combined with efficient digital dimmable ballasts can become standard for street and area lighting, subject to further technical investigations and outputs of the demonstration projects. This corresponds with a target to gradually phase-out the most inefficient lighting products, such as incandescent light bulbs (GLS), mercury vapor lamps, fluora (self-ballasted mercury) lamps, low efficiency fluorescent lamps and ballasts, by 2020. As such, this component can also be considered as a part of the GEF/UNEP-UNDP global initiative for phasing out inefficient lighting (UNDP-PIMS 4060, GEF# 3457: "Global Market Transformation for Efficient Lighting"), from which the project should benefit by international knowledge sharing and contacts with the international lighting industry.

42. With the lighting products listed above, the following end-user categories will be addressed:

- Residential buildings;
- Government buildings;
- Commercial and private service sector buildings;
- Industry (in co-operation with the Industrial EE Project initiated by UNIDO); and
- Street lighting.

43. In addition to working on the new minimum energy performance standards for different lighting products, the project strategy to accelerate market transformation in the residential sector is to sell high-quality CFLs at subsidized prices and for which the remaining part can be paid back in installments through regular electricity bills. The required amount and schedule of back-payment will be defined in such a way that it will not increase the total costs of lighting for the targeted customers, while at the same time saving the Government expenditures on electricity subsidies.

44. A specific target group will be those low-income families that are not able or willing to invest in CFLs due to their still relatively high costs, when compared to the income level of the families and their current electricity tariff. The number of customers in this group is 5 million, which represents over 23% of all residential customers in the country (estimated at 21.2 million). The annual subsidy received by this customer group has been assessed as being close to 462 million Egyptian pounds per year.

45. The project will work together with the Ministry of Electricity and Energy (MoEE) by building on the success of the 6.2 million lamp programme initiated by the previous GEF-funded project. The MoEE has already assigned 18 million Egyptian pounds to support the sale of 3-4 million additional lamps with a subsidy that can go up to 50% of the normal retail price of good-quality CFL lamps.

46. The project will contribute to the design and monitoring of the results of the proposed financial incentives and will complement them by working on public awareness raising, quality standards, testing and labeling of lamps. This is to ensure that the CFLs and other efficient lighting products offered for sale meet the agreed minimum quality standards and that consumers are accurately informed about the performance and quality of the lamps they plan to buy. In parallel, the project seeks to work with local

manufacturers and assemblers to improve the cost/quality ratio of their products in cases where such assistance is requested and needed.

47. A second specific target group will include administrative buildings and those used for public services such as schools, universities and public hospitals. Annual costs of electricity supplied to these buildings exceeded 1.3 billion Egyptian pounds in 2008/2009. Most such buildings suffer from low energy efficiency and, for their lighting, rely on incandescent lamps and electromagnetic ballasts (used with linear fluorescent lamps) as well as, to a lesser extent, on mercury and halogen lamps. The share of lighting in the overall electricity consumption of the buildings in this group varies from 35% up to 90%. The project will work closely with the recently established Energy Efficiency Unit at the Cabinet of Ministers to support transformation of government buildings into energy efficient lighting systems in compliance with the decision of the Supreme Energy Council.

48. Most public buildings lack an energy management system. At the same time, they exhibit very similar working patterns, which serve to facilitate broader-scale energy efficiency improvements. The project will seek to improve the energy efficiency of these buildings, with the initial focus on lighting, by:

- improving public procurement processes to purchase energy-consuming appliances based on life cycle costs rather than on least investment cost; and
- encouraging the appointment of energy managers for public buildings and build their capacity for energy efficient building management, including the introduction of energy surveying and tracking software to monitor energy consumption.

49. As a part of the above, feasibility studies and small demonstration projects to obtain information from, and demonstrate the indirect savings of, efficient lighting systems (such as the possibility of reducing air conditioning loads and improving the power factor) will also be supported.

50. In the area of street lighting, the project will support the Government investment programme to phase-out all inefficient street lighting by 2020. This will include work on: i) the required technical specifications and other regulations to guide public procurement, ii) testing and quality control of different street lighting products available in the market, and iii) building the capacity of the local municipal authorities to improve the efficiency of street lighting in general by providing training on proper placing, luminaries, advanced control and selection of correct types of lamps for different purposes.

51. In the industrial sector, the project is foreseen to collaborate with the parallel UNIDO/GEF "Industrial Energy Efficiency (IEE)" project (GEF project#: 3742) and related initiatives funded by other donors. The lighting products used in industry consist largely of similar technologies to those discussed already, so the same quality control and testing measures will apply also for industrial lighting products. The eventual specific requirements and characteristics of industrial lighting needs as they apply, for instance, to introducing new mandatory regulations for phasing-out inefficient lighting will be studied and discussed with industrial sector stakeholders as a part of project implementation.

52. A study and the preparation of a proposal for the waste management and recycling of the components and/or materials of the lamps that have reached the end of their lifetime will be implemented as a complementary activity to the above. While the project does not currently have the required resources to actually establish such a waste management and recycling system, it will review relevant international experiences and consolidate the different ideas already brought up in this context (such as an idea of a modular lamp design, where the base of the CFL with much longer lifetime than the glass part of a CFL lamp can be re-used and the replaceable glass part recycled), thereby planting the seeds for further work on this. Co-operation possibilities with other donors in this area will be further explored during the implementation of the project and activities will be scaled-up and/or broadened if at all possible.

53. For limiting the mercury content of the lamps, the related EU standards<sup>5</sup> will be studied as a basis for developing and imposing a similar quality standard for Egypt to bring Egyptian requirements in line with those applied in Europe (the current European limit is a maximum of 5 mg of mercury per lamp).

Outcome 2: A comprehensive S&L scheme for building appliances developed and effectively implemented, matching international and regional best policy and technology practices, and with energy efficiency requirements set at a level where cost effectiveness is proven.

54. Minimum energy performance standards and labeling programmes offer a large energy-saving potential that can improve end-use efficiency and significantly contribute to sustainable development. The target for this project component is to strengthen the implementation, regular updating and enforcement of the standards and labels developed under the earlier UNDP/GEF EEIGGR project and to expand the energy efficiency standards and labeling schemes to other electrical appliances by building on the most recent international developments in this field. In addition to the variety of new lighting products addressed under Component 1, these new appliances are expected to include TVs and their accessories (such as digital TV decoders), information and communication appliances (ICT), stand-by power, external power supply (EPS), electric fans and electric motors used in the residential and/or commercial/industrial sectors and prioritized on the basis of their energy-saving potential in the national context. Revised measures will also be proposed for those products already subject to energy labeling: namely refrigerators and freezers, room air conditioners, clothes washers and electric storage water heaters.

55. In addition to working on the adoption of new minimum energy performance standards, strong initial emphasis will be placed on strengthening the implementation and enforcement of the standards and labeling schemes already adopted. This will be facilitated by:

- providing a platform for consultations with the key public and private sector stakeholders for the development of a structured, more comprehensive and proactive energy efficiency compliance checking and enforcement system;
- facilitating the access of public authorities to international information on best practices and lessons learnt on compliance checking and enforcement of appliance EE standards and labels;
- improving the database for, and establishing a permanent market monitoring system with, related institutional agreements to obtain better information about the current stock and annual sale of the targeted appliances as per their energy performance classes (covered under Outcome 3);
- finalizing a proposal for a strengthened compliance checking and enforcement scheme and its implementation arrangements in Egypt for both domestic and imported products, including provisions for testing, organization of the collection of random samples, identification of products requiring specific attention and follow-up on non-compliance;
- clarifying the institutional responsibilities and the training of state inspectors and other public authorities in charge of implementing the adopted compliance checking and enforcement scheme; and
- conducting a quality and capacity assessment of the local testing laboratories and strengthening the existing testing facilities with related capacity building of the staff.

56. The activities above will also provide a basis for developing and expanding the S&L schemes for other appliances, as listed earlier.

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<sup>5</sup> The EU Waste Electrical and Electronic Equipment (WEEE) Directive, a European law designed to encourage and regulate the collection, reuse, recycling and recovery of waste electrical and electronic equipment, for which it sets targets. The Directive aims to improve the environment, and reduce risks to human health through the proper treatment of discarded goods. The regulations will also be informed by the “ECL Guidance Document on Market Surveillance for the RoHS Directive (2002/95/EC)”, as produced by the European Lamp Companies Federation.

57. In parallel, the project will cooperate with local manufacturers, importers and other supply-side stakeholders on public awareness raising and marketing of more energy efficient products. The specific measures and activities will include:

- Developing flyers and posters for distribution and posting in retail stores, along with non-brand-specific marketing and awareness raising campaigns by using printed media, TV and internet. For broader public awareness raising campaigns, the project will collaborate with, and seek cost-sharing from, other parties such as consumer and environmental NGOs, public media and broadcasting companies<sup>6</sup>, after which the project's communication strategy will be fine-tuned for the information channels available. Beside the direct contacts of the project, the UNDP Global Compact Network will provide a good basis to explore these co-operation opportunities further;
- Establishing a dedicated website for energy efficient appliances in co-operation with the planned energy efficiency agency and/or local consumer protection organization(s)<sup>7</sup> with general information about energy efficient appliances and the adopted S&L schemes, easy-to-use calculation tools demonstrating the achievable savings and the differences between the initial investment and life-cycle costs, eventual results of comparative testing of different brands and models, etc.;
- Training of retail store staff in appliance energy efficiency issues and sales arguments in cooperation with the equipment manufacturers and importers, and elaborating possible incentive schemes for sales personnel to promote the sale of more energy efficient appliances; and
- Exploring the opportunities for new implementation and financing mechanisms to promote the purchase of more energy efficient appliances and, as applicable, for expediting the replacement of old appliances. This may include the development of utility-driven DSM programmes to complement the CFL promotional campaigns, specific up-front incentives available on the purchase of EE products, etc. The possibility of using programmatic CDM Programme of Activities (PoA) and other carbon finance opportunities such as for such financing schemes will be studied further under Component 3 of the project.

58. In-store information typically has the greatest impact on consumer decisions, meaning that it is important that consumers are presented with energy performance information via labels in retail stores and that sales staff are able to explain energy efficiency and promote the most efficient products, for which cost-efficiency can be proven. To facilitate this, specific training will be organized for sales personnel together with exploring possibilities for complementary incentives.

59. The co-operation with manufacturers and other appliance and equipment suppliers will have a crucial role in facilitating effective implementation of the proposed activities. First, without the development and supply of adequate products, markets for more efficient products cannot be developed. Second, suppliers must see it as being in their interest to deliver more efficient technologies to industrial, commercial and/or residential customers. Possible drivers for this are increased profit margins or establishing a competitive advantage through better-performing and selling products, which also applies to the rest of the supply chain (including distributors, wholesalers and dealers or retailers). Third, suppliers have, through their marketing efforts, a huge impact on customer perceptions of products, and can thus provide an important channel for enhancing people's awareness of energy efficient products and their benefits. This can be further supported by a comprehensive set of policy instruments using a "carrot and stick" approach.

Outcome 3: Sustaining the project results, including required monitoring and evaluation for adaptive management.

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<sup>6</sup> For example, in the form of free broadcasting time.

<sup>7</sup> By building on some activities already initiated on this by the GEF Small Grants Programme (SGP) in Egypt. This collaboration was initiated already during the previous EEIGGR project by which 23 NGOs, geographically distributed all over the country received funding from SGP and technical assistance from EEIGGR to implement EE activities including revolving funds for selling CFLs, awareness workshops and seminars, EE show rooms, and implementation of small scale demonstration projects.



60. This Component promotes the sustainability and replication of the project results as well as adaptive management by ensuring that proper feedback mechanisms are in place. The specific sub-components/outputs include:

- an updated baseline study, against which the impact of the project can be measured;
- finalized implementation and contractual arrangements for a more comprehensive market monitoring system, collecting data on the annual sales and stock of different appliances by their type and energy efficiency classes to serve the design and implementation of different policies and promotional programmes, and to estimate their impact on national energy consumption and CO<sub>2</sub> emissions;
- project mid-term evaluation and other required reviews, including annual reports from continuing monitoring and evaluation of all the financial support programmes facilitated by the project;
- further elaboration and financing leveraged for applicable financial support mechanisms to continue the implementation of the targeted EE investments, including, as applicable, carbon finance; and
- final project report consolidating the results and lesson learnt from the implementation of the proposed project components and recommendations for the required next steps.

## **2.2 Project indicators, risks and assumptions**

61. The principal indicator of the project's success is increased market share of energy efficient products, where 'energy efficiency' in this context is defined using the most recent EU minimum energy performance standards and label classes as the primary international benchmarks. A complementary indicator is the share of products (taken as random samples or among suspected products) from the market that are found to be in non-compliance with the adopted minimum energy performance standards or announced label classes. As a result of project activities, the share of non-complying products should show a decreasing trend or remain at an equally low level compared with other countries that are considered to have an already advanced and strictly controlled verification and enforcement system in place.

62. The main identified risks include:

- Slow progress of energy pricing reform;
- No or slow adoption of the proposed S&L scheme(s) by the Government;
- S&L may not be enforced effectively despite the support provided by the project;
- Government and/or other donors will not provide support & funds for the proposed financial incentives;
- Lack of co-operation by the private sector
- Retailers are not willing to commit staff time to appliance S&L training;
- Lack of adequate and reliable market data to facilitate the monitoring of project impact and planning of further policy measures;
- Inadequate waste management and recycling of used electric appliances; and
- Inadequate and/or non-capacitated human resources to successfully implement the project.

63. Further details on these risks with related mitigation measures are presented in the "Offline Risk Log" in Annex 7-1.

64. For addressing the project management risk, a committed project manager with adequate outreach and networking skills is absolutely essential for the success of the activities. He/she should have an ability: i) to engage the key stakeholders in constructive discussion about the future EE development needs of Egypt; ii) to guide and supervise the studies done; iii) to present their findings and recommendations in a convincing manner to key policy makers and opinion leaders by taking into account the main macroeconomic and policy drivers for local energy sector development; and iv) to identify areas of future work.

65. A typical risk for different training and capacity building activities is that, after the completion of training, there will be no real demand for the services of the trained experts. The integrated approach adopted by the project is expected to mitigate this risk by combining the training with concrete possibilities to apply the new skills in practice through the adopted verification and enforcement schemes.

### 2.3 Expected global, national and local benefits

66. The calculated global GHG reduction benefits of the project will consist of a combination of:

- direct GHG emission reduction benefits from the specific campaigns and incentive schemes financed and implemented in the frame of the project during its implementation period; and
- indirect GHG reduction benefits resulting from broader market transformation, to which the project is contributing.

67. The cumulative direct GHG reduction benefits of the project have been estimated at 0.95 Mt of CO<sub>2</sub>eq resulting from the agreed financial support schemes for EE lighting and calculated over the expected lifetime of the appliances sold under these schemes. The project may also result in direct post-project GHG reduction benefits, but given the nature of the financial support mechanisms agreed so far, they cannot yet be accurately predicted or quantified.

The cumulative indirect GHG reduction benefits of the project to 2025 have been estimated at the upper end to be 176 Mt of CO<sub>2</sub>eq and at the lower end to be roughly half of this – i.e. 88 Mt of CO<sub>2</sub>eq. This is calculated from the estimated incremental increase in energy efficiency and associated reduction of unit energy consumption of new appliances and equipment sold between 2010 and 2025 that are expected to result from the broadening and strengthening of the standards and labelling schemes implemented through the project. In general, the upper projected savings are predicated on the assumption that Egypt ultimately moves to adopt standards and labelling requirements, which are harmonised with those in the EU, but with implementation delayed several years compared with the EU. It is further assumed that compliance with the adopted measures is reasonably high due to the robustness of the strengthened compliance activities supported through the project. It also takes account of the impact of specific promotional campaigns and other “flanking” measures associated with them. For the lower end savings projection, it is assumed that less stringent measures are adopted and/or that the level of compliance is relatively weak. This has the effect of halving the overall savings. With a causality factor of 60%, the cumulative indirect GHG savings until 2025 for the lower-end scenario can be estimated at 53 Mt of CO<sub>2</sub>eq, which has been considered as the expected minimum indirect cumulative impact of the successful project implementation over the period 2011-2025 i.e. from the project start until ten years after its expected closure.

68. The rationale for considering adopting efficiency requirements harmonised with the EU is as follows:

- Egypt and the EU will enter into a free trade agreement by 2019;
- The requirements are demonstrably feasible from a technical perspective (they simply require Egypt to replicate what has already been done in the EU) and involve the use of known technologies and production processes;
- It supports Egypt’s industrial policy by ensuring that locally produced products can also be sold in EU markets, thereby encouraging domestic producers to become exporters while simultaneously positioning Egypt as a competitive centre for equipment production for both the EU and domestic market; and
- The energy savings are very significant and of high value. Overall they represent 13% of projected national electricity demand by 2020 and 17% by 2030.

69. The upper-end projected electricity savings by each electrical end-use are shown in Figure 1, while the CO<sub>2</sub> savings are proportional to these. The greatest savings are from increased energy efficiency in lighting and especially from phasing out incandescent lamps in favour of higher efficiency options such as

CFLs. The combined savings from the efficiency gains in the other lighting equipment (HIDs, fluorescent lamps and ballasts), however, are of a similar overall magnitude. Other large savings are for the end-uses of: refrigerators and freezers, air conditioners, standby power, ICT, fans, electric motors and TVs.

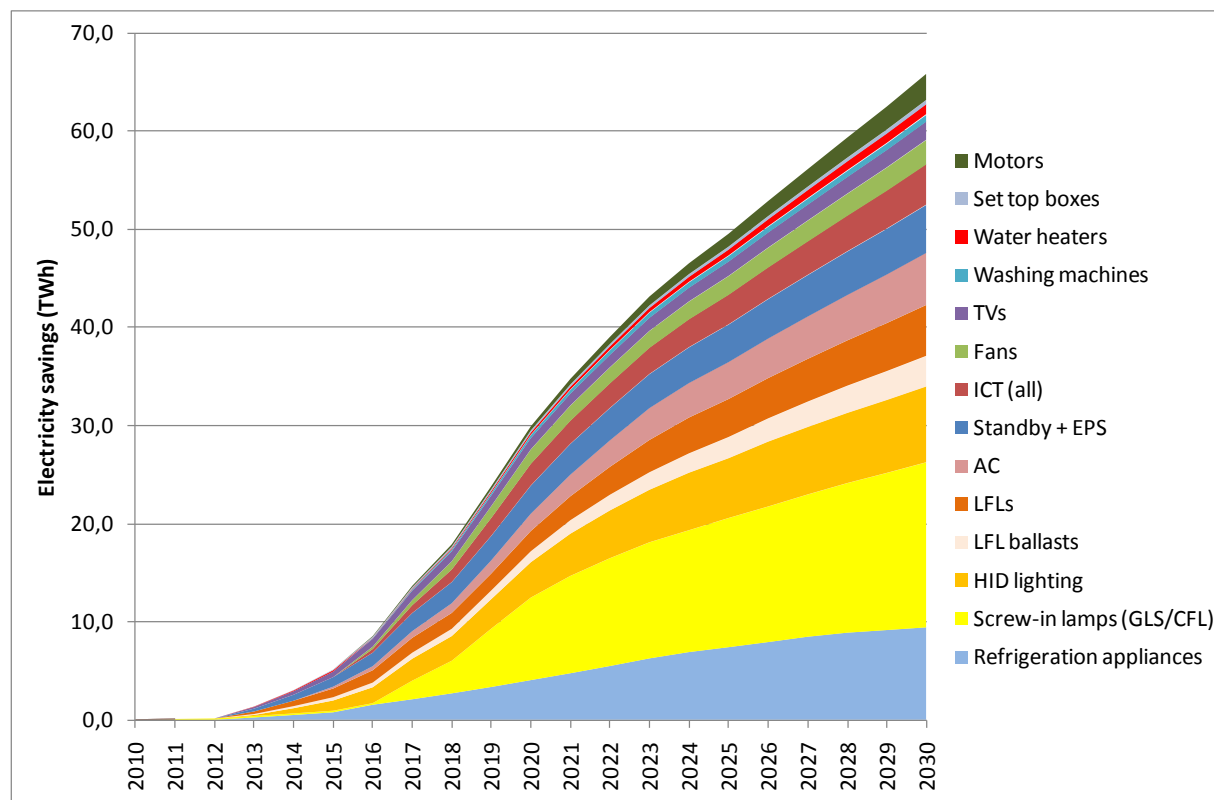


Figure 1. Forecast electricity savings by end-use

70. In the upper-case scenario, the indirect savings from broader, more demanding and better enforced standards and labelling efforts are 60 times greater than the direct savings by the end of 2020 and over 350 times greater if the time-frame is extended to 2030. A more detailed presentation of this GHG reduction analysis is presented in Annex 7-4.

71. The principal envisaged national and local benefits are:

- direct cost savings to consumers from reduced electricity bills;
- reduced need for new power generation capacity, with related cost savings corresponding to the often relatively high marginal costs;
- economic cost savings at the national level and reduced dependency and expenditures on imported energy;
- reduced local pollution produced by conventional energy sources; and
- new job and business opportunities.

## 2.4 Project rationale and GEF policy conformity

72. In accordance with the “Focal Area Strategies and Strategic Programming for GEF-4”, dated July 25, 2007, the project is in compliance with the GEF’s Strategic Programme #1 on “Promoting Energy-Efficient Buildings and Appliances”.

73. Minimum energy performance standards and energy efficiency labeling are proven instruments to achieve the transformation of markets of energy-consuming appliances and equipment, including energy

efficient lighting. Because of their potential to effect market transformation for a range of products that represent the major part of electricity consumption in various sectors (including the residential, service and industrial sector), and because they require the intervention of a relatively small number of actors and thus result in limited transaction costs, EE S&L are among the most cost-effective policy instruments to mitigate global climate change. Their effectiveness assumes that, beside the formal adoption of S&L related regulations, they are also effectively implemented and enforced as well as updated at adequate intervals to reflect the changing market environment.

74. The GHG abatement costs on the basis of the estimated direct GHG reduction benefits of the project are approximately US\$ 4 per tonne of CO<sub>2eq</sub> (by considering the GEF funding only); taking into account the indirect global benefits reduces the abatement cost to less than US\$ 0.04 per tonne of CO<sub>2eq</sub>.

## **2.5 Country Ownership: Country eligibility and country drivenness**

75. According to the Instrument for the Establishment of the Restructured Global Environment Facility, Egypt qualifies for GEF financing on the following grounds:

- It has ratified the UN Framework Convention on Climate Change on December 05, 1994; and
- It receives development assistance from UNDP's core resources.

76. The objective of the project is consistent with the recently stated target of the President of Egypt to reduce national energy consumption by 20% of its current level by 2020. This statement comes at a time when oil reserves are depleting and the Government is stressing the need to revise energy prices at the national level in response to a significant increase in the energy subsidy bill. Accordingly, while the Government has recently increased energy prices and is investigating options for further increases in specific sectors, the economic benefits of demand management through energy efficiency have gained increasing interest.

77. Given the above, the Supreme Energy Council (SEC), headed by the Prime Minister and including all the relevant Ministries, has placed the promotion of energy efficiency at the top of its agenda. The SEC adopted a resolution in one of its early meetings to establish a coordination unit under the auspices of the cabinet ministers as a "coordinating mechanism" to coordinate energy efficiency activities at the national level, promote energy efficiency initiatives and recommend policies to overcome barriers. In Spring 2008, the ruling party issued an energy policy paper asking for the establishment of a central energy efficiency agency under the Supreme Council for Energy, but this has not yet been approved.

78. The proposed project will complement these efforts by facilitating a significant increase in the use of energy efficient lighting and other appliances in Egypt.

79. The proposed project will also form an integral part of a larger programmatic effort by the GEF in Egypt to improve the energy efficiency of the Egyptian economy and shall be closely co-ordinated with the already-mentioned UNIDO industrial energy efficiency (IEE) project.

## **2.6 Financial Modality and Cost-Effectiveness**

80. The GEF support will primarily consist of grants for technical assistance, which will support the Government of Egypt to further develop and implement required policies to facilitate phase-out of inefficient lighting and building appliances. The GEF funding will be complemented by the grant resources of UNDP to primarily support the TA activities under Outcome 2 and the grant resources of the Government of Egypt to support the purchase of CFLs and energy efficient street lighting. Other sources of co- and parallel financing of the project include: i) the in-kind contribution of the New and Renewable Energy Authority (NREA) to cover the costs of premises and NREA staff time to operate the energy efficiency testing laboratories for electric appliances; ii) UN-Spanish MDG Fund to support the policy related activities and leveraging of complementary carbon financing for EE investments; iii) funding leveraged by the Egyptian German Joint Committee on Renewable Energy, Energy Efficiency and Environmental Protection (JCEE) to support project 's public awareness raising activities and related activities dealing with EE standards and labeling schemes as explored further at the outset of project



operations; and iv) parallel financing of the EU MED-ENEC with a focus on supporting energy efficient building appliance and S&L related activities with a regional dimension.

81. For further details about the project budget and related co-operation arrangements, see section “Total Budget and Workplan” and the attached co-financing letters.

82. The proposed measures, seeking to phase-out the most inefficient lighting products from the Egyptian market and to strengthen the role and credibility of both minimum energy performance standards (pushing the market) and the informative energy performance labels (pulling the market), are in line with the international experiences and lessons-learned regarding the most cost-effective measures to improve the energy efficiency of different building appliances and to limit the increase of electricity consumption.

83. The combined direct and indirect global benefits of the project resulting from the new regulations and foreseen investment support schemes implemented by the project have been assessed to be between 54 and 107 million tonnes of CO<sub>2</sub> compared to the baseline. With a GEF funding request of approximately US\$4.5 million, this would (very conservatively) correspond to abatement costs of less than US\$ 0.09 per tonne of CO<sub>2</sub> reduced.

## **2.7 Sustainability (including financial sustainability)**

84. In order to facilitate sustainable market transformation, there is a need for parallel, mutually supporting measures that can create sustainable demand through an enabling policy framework and other promotional measures and, in parallel, to build the confidence of customers by offering products that are in compliance with their stated performance. As described earlier, the project is working on both of these fronts.

85. While minimum energy performance standards regulate the products that can enter the market, energy labeling seeks to influence consumers' voluntary choices for more energy efficient appliances with a goal that the information presented in the labels will become one of the key drivers for selecting between different brands and models. For this to happen, labels need to be consistently and continuously displayed along with products. Consumers need to find the labels credible and understandable and to understand the connection to life-cycle costs, product quality and environmental implications. Once the majority of customers learn to demand and interpret the information presented in the labels as a part of their purchasing negotiations and can trust the information presented there (backed up by adequate compliance checking schemes), the project results can be viewed as sustainable and largely irreversible in a mature appliance market with adequate competition between the different brands.

86. An obvious requirement for the long term sustainability of the project is that the tariff reform will continue with the aim of having the tariffs to reflect the full costs of energy generation and distribution and their environmental impacts. The financial incentives required and applied for the transition period until electricity tariffs have reached the level of full cost-recovery need to be made predictable and backed up by adequate financial resources so as to prevent damaging “stop-and-go” dynamics in the market.

## **2.8 Replicability**

87. Given the current interest of several UNDP/GEF programme countries to develop and implement energy efficiency lighting, standards and labeling programmes, the materials developed and the results and lessons learnt in this project are expected to be of direct interest also to other countries, including those participating in the GEF Global Energy Efficient Lighting Initiative. Close monitoring and evaluation of the project implementation and results also in this respect will be of primary importance.

88. The project seeks to facilitate continuing contacts and co-operation between the different stakeholder groups at the national and international level by organizing seminars, workshops and other public events, thereby bringing the project proponents, policy makers and potential investors / other donors together.

### 3. PROJECT RESULTS FRAMEWORK:

<b>This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD:</b> Sustainable management of environment and natural resource incorporated into poverty reduction strategies/key national development frameworks and sector strategies					
<b>Country Programme Outcome Indicators:</b> Access to cleaner energy services and low-emission technology including renewable energy, energy efficiency and/or advanced fossil fuel technologies promoted					
<b>Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one):</b> <u>1. Mainstreaming environment and energy</u> OR 2. Catalyzing environmental finance OR 3. Promote climate change adaptation OR 4. Expanding access to environmental and energy services for the poor.					
<b>Applicable GEF Strategic Objective and Program:</b> GEF's Strategic Programme #1 of GEF-4 on "Promoting Energy-Efficient Buildings and Appliances".					
	Indicator	Baseline	Targets End of Project	Source of verification	Risks and Assumptions
<b>Project Objective<sup>8</sup></b> To improve the energy efficiency of end-use equipment, namely building appliances and lighting systems manufactured, marketed and used in Egypt	The level of compliance of the targeted appliances with the adopted minimum energy performance standards ( <i>a priori</i> the MEPS to be adopted in Egypt are expected to be in line with those adopted in EU.)	From 10% to 50% higher energy consumption (depending on the appliance) when comparing to the planned MEPS (for further details see Annex 7-4).	Over 80% of the appliances sold in the Egyptian market are in compliance with the requirements of those MEPS and labeling schemes that are expected to be in force by the end of the project  (for further details see Annex 7-5).	Market monitoring and compliance checking reports produced in the frame of the project	Effective implementation and enforcement of the adopted EE policies
	Amount of reduced CO <sub>2</sub> emissions compared to the projected baseline	See the baseline scenario presented in Annex 7-4.	Direct incremental reduction of GHG emissions by 0.95 million tons of CO <sub>2</sub> eq by the end of the project and estimated cumulative indirect GHG emission reduction of at least 53 million tons of CO <sub>2</sub> eq by 2025 on the basis of a conservative policy scenario and a GEF causality factor of 60%.	Market monitoring reports and official energy statistics.  Post project market monitoring and evaluations	See above
<b>Outcome 1<sup>9</sup></b> Accelerated growth of the EE lighting market in Egypt, in line with the Global UNEP-UNDP EE Lighting initiative.	Total volume or the market share of the CFLs and other EE lighting appliances in Egypt	CFLs: No new MEPS adopted + annual sale of 25 million CFLs reached by 2015 as a result of a continuing natural growth.  LFLs and HIDs: No new EE requirements formally adopted and reflected in public procurement processes.	CFLs: Annual sale of 35 million CFLs reached by 2015 resulting from project's market promotion activities + new MEPS adopted for completely phasing out incandescent light bulbs as per the schedule elaborated in Annex 7-5.  LFLs and HIDs (street Lighting): The second set of EU consistent	Market monitoring reports	Competitive prices and consumers' trust on the quality and performance of EE lighting  Availability of different EE lighting products that meet the needs of consumers for different lighting applications

<sup>8</sup> Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR

<sup>9</sup> All outcomes monitored annually in the APR/PIR. It is highly recommended not to have more than 4 outcomes.

			EE requirements have entered into force <sup>10</sup> , they are reflected in the technical specifications for public procurement and less than 10% of the random samples tested show non-compliance.		
<b>Outcome 2</b> A comprehensive S&L scheme for building appliances developed and effectively implemented, matching international and regional best policy and technology practices, and with energy efficiency requirements set at a level where cost effectiveness is proven.	The status and content of the legal and regulatory acts and the agreed implementation arrangements dealing with appliance minimum energy performance standards (MEPS), labeling schemes and their enforcement.  The share of non-compliant products.	Minimum energy performance standards and/or labeling schemes developed and adopted for 5 appliances (CFLs, refrigerators/freezers, washing machines, air-conditioners and electric water heaters), but not adequately enforced and monitored yet.	Strengthened implementation, enforcement and market monitoring of the S&L schemes adopted for the first five appliances to cover both import and local production as demonstrated by verified annual statistics on the sale of the different appliances sold as per the different energy classes.  Expanded S&L, implementation, enforcement and market monitoring schemes formally adopted for new appliances consisting of: TVs and their accessories, information and communication appliances (ICT), stand-by power, external power supply (EPS), electric fans and electric motors as per the schedule presented in Annex 7-5.  Fewer than 10% of all the random samples tested at the end of the project show non-compliance.	Official Gov't publications  Local and international testing reports  Project reports and final evaluation	Interest of the key policy makers and Government entities to strengthen, expand and ensure effective implementation and enforcement of the new S&L schemes
<b>Outcome 3</b> Sustained project results	The level of information available for adaptive management and for measuring the impact of the project.  The status of recommendations contributing to institutional sustainability.	Insufficient information for adaptive management and for measuring the impact of the project.  Insufficient institutional mechanisms in place to ensure sustainability of project results.	Annually updated information on the sale of each targeted appliance as per its energy performance class and the level of compliance with the adopted standards and regulations available.  Sustained institutional and financial mechanisms in place to promote the market for EE appliances and related market monitoring.	Annual project market monitoring reports  Project final evaluation	Agreements and institutional arrangements for regularly obtaining the required market data in place  Successful completion of the prior project activities

<sup>10</sup> for further details see page 43

## Project Outputs and Related Target(s) / Subtarget(s)

<p><b>Outcome 1</b> Accelerated growth of the EE lighting market in Egypt, in line with the Global UNEP-UNDP EE Lighting initiative.</p>	<p><b>Outcome 2</b> A comprehensive S&amp;L scheme for building appliances developed and effectively implemented.</p>	<p><b>Outcome 3</b> Sustained project results</p>
<p><b>Output 1.1</b> An enabling regulatory framework for phasing out energy inefficient lighting, including the adoption of:</p> <ul style="list-style-type: none"> <li>• New laws and/or regulations by the end of the project, which will gradually force all inefficient lighting appliances that don't meet the adopted MEPS out of the market by the end of 2020; and</li> <li>• As applicable, complementary regulations and/or standards to ensure other required minimum quality and other characteristics of the lighting products offered to the market in terms of power factor, lifetime, minimizing the environmental impacts ("recyclability") etc. and/or new regulations for passing adequate and credible information on these characteristics to the targeted clients by product labels.</li> </ul>	<p><b>Output 2.1</b> Monitoring and data collection studies for end-use sales and appliance energy use in the residential and commercial sector, including:</p> <ul style="list-style-type: none"> <li>• annual sales data on all targeted appliances (divided by their energy consumption classes); and</li> <li>• finalized monitoring and statistical studies for estimating the share of different appliances in the current electricity consumption of the residential and commercial sectors and the average number and energy consumption of the appliances currently in use (with updated information for the appliance stock model)</li> </ul>	<p><b>Output 3.1</b> An updated baseline study, against which the impact of the project can be measured.</p>
<p><b>Output 1.2</b> Innovative and attractive financing mechanisms in place to support and leverage financing for EE lighting and other related EE investments, including the continuation and expansion of the Government-supported CFL incentive programs and the EE loan schemes with complementary funding leveraged for that purpose during project implementation.</p>	<p><b>Output 2.2</b> A detailed proposal for a strengthened compliance checking and enforcement scheme for both locally produced and imported products that are subject to already adopted S&amp;L schemes (including required legal amendments to effectively follow-up non-compliance)</p>	<p><b>Output 3.2</b> A permanent market monitoring system for assessing the impact of the project and to provide a basis for identifying new energy saving opportunities, EE policy measures and programs with finalized market monitoring methodology and agreements with the key stakeholders to submit the required initial market data. The system is to regularly provide updated information on annual sales of different appliances per agreed energy classes of all targeted appliances.</p>
<p><b>Output 1.3</b> Improved energy management of public buildings by appointment and capacity building of energy managers and improvement of the public procurement processes by ensuring that by the end of the project:</p> <ul style="list-style-type: none"> <li>• Main buildings of at least 2 ministries have trained energy managers and an adequate energy management system in operation; and</li> <li>• Coherent technical specifications and related guidance for the procurement of energy efficient lighting and, as applicable, other electric office appliances have been adopted for all public buildings and street lighting,</li> </ul>	<p><b>Output 2.3</b> Established institutional mechanism and finalized implementation arrangements for monitoring, enforcing and regularly updating the S&amp;L schemes, including training of all key staff of the public entities responsible for the implementation of these schemes.</p>	<p><b>Output 3.3</b> Project mid-term evaluation and other required reviews, including annual reports from continuing monitoring of and evaluation of all the financial support programs facilitated by the project.</p>
<p><b>Output 1.4</b> Updated guidelines and regulations for implementing energy efficient street lighting with related capacity building and awareness raising of the municipal authorities responsible for that by ensuring that by the end of the project:</p> <ul style="list-style-type: none"> <li>• A specific unit in the Ministry of Local Development to supervise the promotion of energy efficient street lighting established;</li> <li>• Coherent technical specifications, procedures and guidance for the procurement of energy efficient street lighting have been formally adopted and introduced to all municipalities; and</li> <li>• Municipal authorities responsible for planning and procuring street lighting (covering at least 50 % of the Egyptian market) have been trained on how to reduce the energy consumption of street lighting, while not compromising on the lighting performance and the overall costs.</li> </ul>	<p><b>Output 2.4</b> A detailed proposal and draft legal documents for an expanded, mandatory EE S&amp;L scheme for the agreed new appliances with concluded stakeholder consultations</p>	



<p><b>Output 1.5</b> A completed study on improving the energy efficiency of lighting in industry elaborating the options, applicable technologies and required other measures to improve energy efficiency of industrial lighting with related recommendations and awareness raising materials</p>	<p><b>Output 2.5</b> Upgraded testing facilities with adopted testing standards, trained staff and internationally verified testing procedures and results for checking compliance of all targeted appliance groups with the adopted standards and labelling schemes.</p>	<p><b>Output 3.4</b> Further elaboration and financing leveraged for applicable financial support mechanisms (including, as applicable, carbon finance) to continue the implementation of EE investments</p>
<p><b>Output 1.6</b> Joint marketing / public awareness campaigns with local lamp manufacturers and vendors, including at least 3 market segment-specific marketing and awareness raising campaigns targeting i) the residential sector; ii) public buildings and offices; and iii) street lighting with the co-financing share of these campaigns reaching 50% at a minimum.</p> <p>(For each segment, the most effective means of communication will be selected: that may include the use of TV (for the residential sector in particular), advertisements and articles in newspapers and magazines as well as separate information leaflets and posters.)</p>	<p><b>Output 2.6</b> Specific promotional campaigns, dedicated websites and other materials to raise public awareness about adopted S&amp;L schemes and, as applicable, to expedite the phase-out of old, inefficient appliances, including:</p> <ul style="list-style-type: none"> <li>• Delivery of joint marketing campaigns with the manufacturers and retail chain highlighting the EE aspects and the life-cycle costs approach, including, as applicable, booklets, billboards, newspaper advertisements, TV spots, flyers, internet etc.;</li> <li>• A dedicated web site established to support consumers' choice with an emphasis on energy efficiency and regularly updated with test results and other product information, pricing, easy to use calculation tools, etc.;</li> <li>• As applicable, specific promotional campaigns to expedite the phase-out of old, inefficient appliances</li> </ul>	<p><b>Output 3.5</b> Strengthened institutional and inter-agency co-ordination mechanism, including capacity building of the Technical Secretariat of the Supreme Energy Council and the EE Unit at the Cabinet of Ministers, to support further energy efficiency policy measures.</p>
<p><b>Output 1.7</b> Improved quality control system and, as applicable, complementary procurement support to provide non-partial information to the targeted customers on the quality and performance of the lamps, including:</p> <ul style="list-style-type: none"> <li>• a mandatory or voluntary scheme with an adequate verification system adopted for displaying information about the performance and other agreed quality parameters/indicators of different lighting products in place by the end of the project (supported by required legal or regulatory acts);</li> <li>• The share of random samples that fail to meet their announced performance and other quality parameters show a decreasing trend reaching less than 10% by the end of the project; and</li> <li>• A web-site, specific publication or other information platform supported by corresponding testing arrangements (and financing for that) in place to provide comparative and non-partial information to the targeted customers about the performance and other quality parameters of the different brands and types of lighting products.</li> </ul>	<p><b>Output 2.7</b> Trained sales staff in the main retail stores (complemented, as applicable, by specific incentives such as premiums for the sales personnel for the sale of EE products) to market the products on the basis of their energy performance and related life-cycle costs beside other characteristics.</p> <p>(To be verified by random visits to check to what extent energy efficiency and life-cycle cost reduction aspects are highlighted in the marketing strategy of the retail chain and its staff).</p>	<p><b>Output 3.6</b> Final project report consolidating the results and lesson learnt from the implementation of the different project components and recommendations for the required next steps.</p>
<p><b>Output 1.8</b> All local manufacturers are exposed to information and capacity building to improve the quality of their products</p>		
<p><b>Output 1.9</b> A finalized study and proposal for the different options to manage and recycle the components and/or materials of the lighting appliances that have reached the end of their lifetime.</p>		

**TOTAL BUDGET AND WORKPLAN**

<b>Award ID:</b>	00060162	Project ID(s):	00075645
<b>Award Title:</b>	Egypt - Improving the energy efficiency of lighting and other building appliances		
<b>Business Unit:</b>	EGY10		
<b>Project Title:</b>	Country Name Project Title: <b>Egypt - Improving the energy efficiency of lighting and other building appliances</b>		
<b>PIMS no.</b>	4231		
<b>Implementing Partner (Executing Agency)</b>	Ministry of Electricity and Energy (MoEE)		

GEF Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)	See Budget Note:
<b>OUTCOME 1:</b> Accelerated growth of the EE Lighting Market in Egypt, in line with the Global UNEP-UNDP EE Lighting initiative.	MoEE	62000	GEF	71200	International Consultants	42 000	42 000	42 000	12 000	10 000	148 000	1
				71300	Local Consultants	36 800	36 800	36 800	36 800	36 800	184 000	
				71400	Contractual services – individuals	120 000	120 000	120 000	120 000	120 000	600 000	
				71600	Travel	2 000	2 000	2 000	2 000	2 000	10 000	
				72100	Contractual services – companies	60 000	60 000	60 000	60 000	60 000	300 000	2
				72200	Equipment	100 000	50 000	50 000			200 000	5
				72400	Grants		65 000	65 000	65 000	65 000	260 000	6
				74200	Printing and publication costs	4 000	4 000	4 000	4 000	4 000	20 000	3
				74500	Miscellaneous	3 600	3 600	3 600	3 600	3 600	18 000	
				75700	Training workshops and meetings	10 000	15 000	15 000	5 000	5 000	50 000	4
					<b>sub-total GEF</b>	<b>378 400</b>	<b>398 400</b>	<b>398 400</b>	<b>308 400</b>	<b>306 400</b>	<b>1 790 000</b>	
	<b>Total Outcome 1</b>	<b>378 400</b>	<b>398 400</b>	<b>398 400</b>	<b>308 400</b>	<b>306 400</b>	<b>1 790 000</b>					
<b>OUTCOME 2:</b> A comprehensive S&L scheme for building appliances developed and effectively implemented, matching international and regional best policy and	MoEE	62000	GEF	71200	International Consultants	60 000	60 000	60 000	10 000	10 000	200 000	1
				71300	Local Consultants	40 000	40 000	40 000	40 000	40 000	200 000	
				71400	Contractual services – individuals	89 600	89 600	89 600	89 600	89 600	448 000	
				71600	Travel	2 000	2 000	2 000	2 000	2 000	10 000	
				72100	Contractual services – companies	78 000	78 000	78 000	78 000	78 000	390 000	2, 8
				72200	Equipment		150 000	100 000	100 000	350 000	700 000	7

technology practices, and with energy efficiency requirements set at a level where cost effectiveness is proven.				74200	Printing and publication costs	2 000	2 000	2 000	2 000	2 000	<b>10 000</b>	3		
				74500	Miscellaneous	2 400	2 400	2 400	2 400	2 400	<b>12 000</b>			
				75700	Training workshops and meetings	6 000	6 000	6 000	6 000	6 000	<b>30 000</b>	4		
					<b>sub-total GEF</b>	<b>280 000</b>	<b>430 000</b>	<b>380 000</b>	<b>330 000</b>	<b>580 000</b>	<b>2 000 000</b>			
				<b>4000</b>	<b>UNDP</b>	72100	Contractual services – companies	50 000	100 000	100 000	50 000	30 000	<b>330 000</b>	2, 8
							<b>sub-total UNDP</b>	<b>50 000</b>	<b>100 000</b>	<b>100 000</b>	<b>50 000</b>	<b>30 000</b>	<b>330 000</b>	
				<b>Total Outcome 2</b>	<b>330 000</b>	<b>530 000</b>	<b>480 000</b>	<b>380 000</b>	<b>610 000</b>	<b>2 330 000</b>				
<b>OUTCOME 3:</b> Sustained project results	<b>MoEE</b>	<b>62000</b>	<b>UNDP</b>	71200	International Consultants	48 000		32 000		32 000	<b>112 000</b>	1		
				71300	Local Consultants			8 000		8 000	<b>16 000</b>			
				71600	Travel	1 000	1 000	1 000	71200	1 000	<b>5 000</b>			
				72100	Contractual services – companies	30 000	30 000	15 000	15 000	60 000	<b>150 000</b>	2		
				74200	Printing and publication costs	1 000	1 000	1 000	1 000	1 000	<b>5 000</b>	3		
				74500	Miscellaneous	1 200	1 200	1 200	1 200	1 200	<b>6 000</b>			
				75700	Training workshops and meetings	1 200	1 200	1 200	1 200	1 200	<b>6 000</b>	4		
					<b>sub-total GEF</b>	<b>82 400</b>	<b>34 400</b>	<b>59 400</b>	<b>19 400</b>	<b>104 400</b>	<b>300 000</b>			
			<b>Total Outcome 3</b>	<b>82 400</b>	<b>34 400</b>	<b>59 400</b>	<b>19 400</b>	<b>104 400</b>	<b>300 000</b>					
<b>PROJECT MANAGEMENT UNIT</b>  (This is not to appear as an Outcome in the Results Framework and should not exceed 10% of project budget)	<b>Party 1</b>	<b>62000</b>	<b>GEF</b>	71400	Contractual services – individuals	65 000	65 000	65 000	65 000	65 000	<b>325 000</b>			
				71600	Travel	1 200	1 200	1 200	1 200	1 200	<b>6 000</b>			
				72200	Equipment	8 000					<b>8 000</b>			
				72400	Communication	1 000	1 000	1 000	1 000	1 000	<b>5 000</b>			
				72500	Office supplies	1 000	1 000	1 000	1 000	1 000	<b>5 000</b>			
				74500	Miscellaneous	1 000	1 000	1 000	1 000	1 000	<b>5 000</b>			
				75700	Workshops and meetings	1 200	1 200	1 200	1 200	1 200	<b>6 000</b>	4		
					<b>sub-total GEF</b>	<b>78 400</b>	<b>70 400</b>	<b>70 400</b>	<b>70 400</b>	<b>70 400</b>	<b>360 000</b>			
		<b>4000</b>	<b>UNDP</b>	71400	Contractual services – individuals	13 000	13 000	13 000	13 000	13 000	<b>65 000</b>			
				74500	Miscellaneous	1 000	1 000	1 000	1 000	1 000	<b>5 000</b>			
			<b>sub-total UNDP</b>	<b>14 000</b>	<b>14 000</b>	<b>14 000</b>	<b>14 000</b>	<b>14 000</b>	<b>70 000</b>					
			<b>Total Management</b>	<b>92 400</b>	<b>84 400</b>	<b>84 400</b>	<b>84 400</b>	<b>84 400</b>	<b>430 000</b>					
<b>PROJECT TOTAL</b>						<b>754 400</b>	<b>1 153 400</b>	<b>1 218 400</b>	<b>834 400</b>	<b>889 400</b>	<b>4 850 000</b>			

**Budget Notes:**

Number	Note
1	Including the mission (travel) costs
2	Consisting of services to be procured from both international and national companies and/or institutions to facilitate, among others, the enhancement, upgrading and quality control of the required market monitoring and other market surveillance activities, public awareness raising and marketing. The amounts reflect the relatively high costs that are typically associated with such services for more than 10 different product categories of high-volume consumer goods
3	Including awareness raising and training materials
4	Including also the costs of training workshops and stakeholder consultations meetings
5	Monitoring and testing equipment
6	Cost-sharing of demo projects
7	Hardware for upgrading the testing labs for both lighting and other appliances
8	Including cost-sharing for the contractual costs of testing lab upgrade, accreditation and cross-checking costs for both lighting and other appliances

**Summary of Funds:** <sup>11</sup>

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	<b>Total</b>
<b>GEF</b>	690 400	1 039 400	1 104 400	770 400	845 400	<b>4 450 000</b>
<b>UNDP</b>	64 000	114 000	114 000	64 000	44 000	<b>400 000</b>
<b>MoEE/EEHC (Cash)</b>	2,000,000	2,000,000	2,000,000	3,000,000	3,000,000	<b>12,000,000</b>
<b>MoEE/EEHC (In-kind)</b>	46,000	46,000	46,000	46,000	46,000	<b>230,000</b>
<b>NREA</b>	100,000	100,000	400,000	400,000	200,000	<b>1,200,000</b>
<b>MDG-F</b>	100,000	200,000	200,000			<b>500,000</b>
<b>GTZ-JCEE</b>	40,000	30,000	30,000			<b>100,000</b>
<b>MED-ENEC</b>	100,000	200,000	200,000	125,000		<b>625,000</b>
<b>TOTAL</b>	<b>3,140,400</b>	<b>3,729,400</b>	<b>4,094,400</b>	<b>4,405,400</b>	<b>4,135,400</b>	<b>19 505 000</b>

<sup>11</sup> Summary table should include all financing of all kinds: GEF financing, cofinancing, cash, in-kind, etc. etc



## Summary of project co-financing

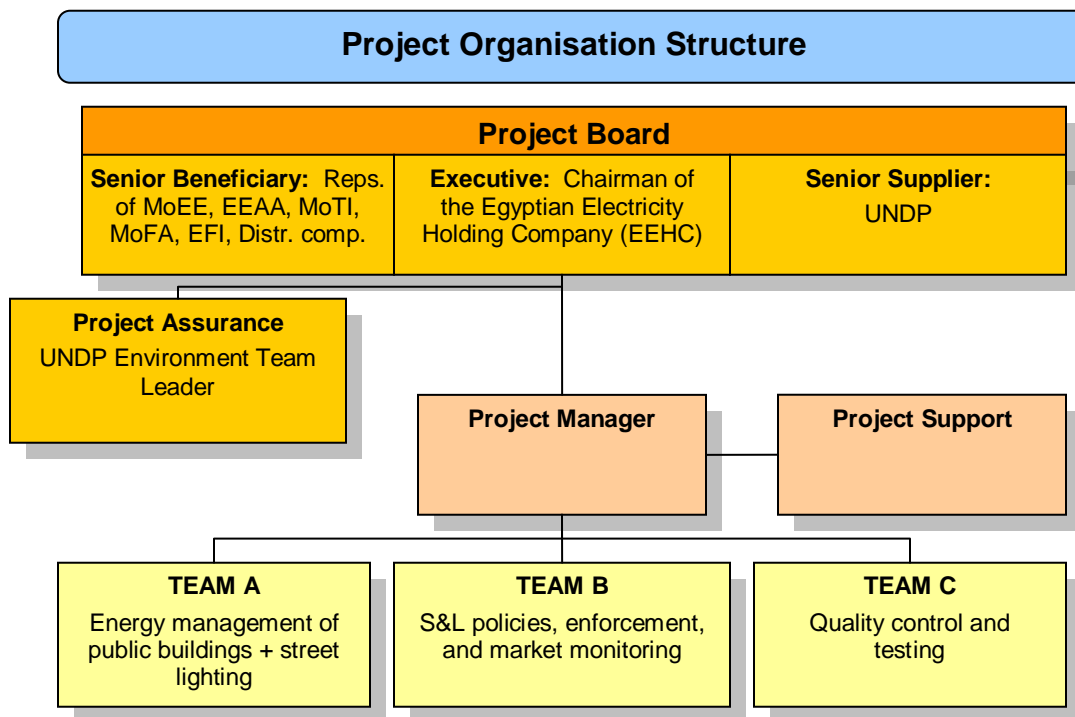
Source	Outcome 1		Outcome 2		Outcome 3		Project Management		Total		Notes	Letter #
	Cash US\$	In-kind US\$	Cash US\$	In-kind US\$	Cash US\$	In-kind US\$	Cash US\$	In-kind US\$	Cash US\$	In-kind US\$		
MoEE/EEHC	12 000 000							230 000	12 000 000	230 000	Cash: Financial incentives for CFLs and EE Street Lighting at the amount of EGY 18 million and 50 million, respectively <sup>12</sup> In-kind: Provision of office space, staff and other logistical support for project management	1
NREA				1 080 000				120 000	0	1 200 000	Costs of premises and staff time to operate the energy performance testing facilities for electric appliances	2
UNDP-TRAC			330 000				70 000		400 000	0	For further details, see the ATLAS budget	3
MDG-F					460 000		40 000		500 000 <sup>13</sup>		Support and capacity building of the Supreme Energy Council, its Technical Secretariat and the EE Unit at the Cabinet of Ministers (Output 3.5). Support for developing new financial support mechanisms and leveraging carbon financing for EE appliances (Output 3.4). Support for demo projects in public buildings for EE lighting	3
GTZ-JCEE			14				100 000		100 000		An awareness raising campaign to promote energy efficient appliances	4
MED-ENEC			575 000				50 000		625 000		Support for short term experts, capacity building workshops etc. for topics of regional interest	5
<b>Subtotal</b>	<b>12 000 000</b>	<b>0</b>	<b>905 000</b>	<b>1 080 000</b>	<b>460 000</b>	<b>0</b>	<b>260 000</b>	<b>350 000</b>	<b>13 625 000</b>	<b>1 430 000</b>		
<b>TOTAL</b>	<b>12 000 000</b>		<b>1 985 000</b>		<b>460 000</b>		<b>610 000</b>		<b>15 055 000</b>			

<sup>12</sup> When comparing the figures presented here to the ones shown in the EEHC co-financing letter, it is to be taken into account that for the CFLs, only LE 18 million has been considered since this is going to be spent during the actual project implementation. For street lighting, further consultations with the Government suggested to use a more conservative figure of LE 50 million out of LE 260 million as formal GEF project co-financing. Taking into account the above, the combined cash co-financing was calculated as LE 68 million i.e. about USD 12 million by using the exchange rate of 1 LE = 0,177 USD.

<sup>13</sup> The USD 500,000 MDG-F co-financing consist of USD 300,000 support (out of 350,000) for the Supreme Energy Council, USD 160,000 for CDM related activities (out of USD 1,2 million) and USD 40,000 for the management of the above, at the level they are foreseen to contribute to the specific objective and outcomes of the proposed GEF project.

<sup>14</sup> Minimum of USD 1.9 million expected to be leveraged from the private sector during project implementation for the actual implementation of the campaigns.

#### 4. MANAGEMENT ARRANGEMENTS



89. The project will be executed by the Ministry of Electricity and Energy following UNDP guidelines for nationally executed projects. The executing agency will sign a grant agreement with UNDP and will be accountable to UNDP for the disbursement of funds and the achievement of the project goals, according to the approved work plan. The executing agency will assign a senior officer as the Project Director to: (i) coordinate the project activities with activities of other Government entities; (ii) certify the expenditures in line with approved budgets and work-plans; (iii) facilitate, monitor and report on the procurement of inputs and delivery of outputs; (iv) approve the Terms of Reference for consultants and tender documents for sub-contracted inputs; and (v) report to UNDP on project delivery and impact.

90. A Project Steering Committee (Project Board) will be established at the inception of the project to monitor the project progress, to guide its implementation and to support the project in achieving its listed outputs and outcomes. It will be chaired by the chairman of the Egyptian Electricity Holding Company (EEHC) and include representatives from the: Ministry of Electricity and Energy (MoEE), electricity distribution companies, Electric Utility and Consumer Protection Regulatory Agency (EEUCPRA), UNDP, Egyptian Environmental Affairs Agency (EEAA), Ministry of Trade and Industry (MoTI), Ministry of Foreign Affairs (MoFA) and the Egyptian Federation of Industry (ETI). Other members can be invited at the decision of the PSC on an as-needed basis, but taking due regard that the PSC remains sufficiently lean to be operationally effective. The final list of the PSC members will be completed at the outset of project operations and presented in the Inception Report by taking into account the envisaged role<sup>15</sup> of different parties in the PSC. The project manager will participate as a non-voting member in the PSC meetings and will also be responsible for compiling a summary report of the discussions and conclusions of each meeting.

91. The day-to-day management of the project will be carried out by a Project Management Unit (PMU) under the overall guidance of the Project Steering Committee. The PMU will be based in Cairo and will

<sup>15</sup> **Senior Supplier:** individual or group representing the interests of the parties concerned which provide funding for specific cost sharing projects and/or technical expertise to the project. **Senior Beneficiary:** individual or group of individuals representing the interests of those who will ultimately benefit from the project.

report to UNDP, the executing agency and the PSC. The PMU will be composed of a project manager, a project assistant and an accountant, whose Terms of Reference are presented in Section IV, Part IV of this project document. The project manager will be selected jointly by the executing agency and UNDP, in consultation with the UNDP/GEF Regional Technical Adviser from the UNDP/GEF Regional Co-ordination Unit in Bratislava.

92. The project manager will be supported by the project's international technical adviser(s) as well by the national experts taking the lead in the implementation of the specific technical assistance components of the project. Contacts with experts and institutions in other countries that have already gained more experience in implementing S&L programmes are also to be established.

93. The Egyptian Industry Federation is representing the views of local manufacturers and other supply chain operators in the project. The local CFL and appliance industry is also expected to: (i) support the establishment and information gathering for adequate market monitoring of products associated with the project; (ii) participate in the development, implementation and cost-sharing of public awareness raising and other promotional campaigns and trainings nationwide; and (iii) elaborate and present the views of local industry and, as applicable, participate in consultations on further development needs of the legal and regulatory framework and organization of its implementation.

94. UNDP Egypt will maintain the oversight and management of the overall project budget. It will be responsible for monitoring project implementation, timely reporting of the progress to the UNDP Regional Co-ordination Unit and GEF as well as organizing mandatory and possible complementary reviews and evaluations on an as-needed basis. It will also support the executing agency in the procurement of the required expert services and other project inputs and administer the required contracts. Furthermore, it will support the co-ordination and networking with other related initiatives and institutions in the country.

95. For successfully reaching the stated objective and outcomes of the project, it is essential that the progress of different project components will be closely monitored both by the key local stakeholders and authorities as well as by project's international technical advisors, starting with the finalization of the detailed, component-specific work plans and implementation arrangements and continuing through the project's implementation phase. The purpose of this is to facilitate early identification of possible risks to successful completion of the project together with adaptive management and early corrective action, when needed.

96. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo should appear on all relevant GEF project publications, including any hardware purchased with GEF funds. Any citation on publications regarding projects funded by GEF should also accord proper acknowledgement to GEF.

97. The conclusions and lessons learnt from the previous energy efficiency projects, in particular the mentioned UNDP/GEF EEIGGR project, have been taken into account in the design of this new project. The applicable parts of the information collected and the work and contacts initiated during the previous project will be fully utilized, thereby not losing or duplicating the work already done

98. UNIDO is currently developing an "Industrial Energy Efficiency (IEE)" project (GEF#: 3742). Otherwise, there are no other GEF-funded projects under development. With the UNIDO project, opportunities for co-operation can be found, in particular with regard to industrial lighting needs as well as under S&L components as it may concern typical energy consuming appliances used by industry, such as electric motors. For the actual implementation phase, proper care will be taken to have adequate communication and co-ordination mechanisms in place to ensure that areas of common interest can be addressed in a cost-efficient way.

99. Beside the GEF-funded activities, there are activities supported by other donors, with which cooperation opportunities will be further explored during implementation. Among these are the EU-supported second phase of the MED-ENEC (Energy Efficiency in the Construction Sector in Mediterranean Countries) project as well as the activities of the Egyptian German Joint Committee for Co-operation on Renewable Energy, Energy Efficiency and Environmental Protection (JCEE). For further details, see the related co-financing letters attached to this project document

## 5. MONITORING FRAMEWORK AND EVALUATION

The project will be monitored through the following M& E activities. The M&E budget is provided in the table below.

### Project start:

A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- e) Plan and schedule Project Board meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

### Quarterly:

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).
- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

### Annually:

- Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).

- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

#### **Periodic Monitoring through site visits:**

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

#### **Mid-term of project cycle:**

The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (insert date). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the [UNDP Evaluation Office Evaluation Resource Center \(ERC\)](#).

The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

#### **End of Project:**

An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the [UNDP Evaluation Office Evaluation Resource Center \(ERC\)](#).

The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

#### **Learning and knowledge sharing:**

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons learned. The project



will identify, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

### M& E work plan and budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> <li>▪ Project Manager</li> <li>▪ UNDP CO, UNDP GEF</li> </ul>	Indicative cost: 10,000	Within first two months of project start up
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> <li>▪ UNDP GEF RTA/Project Manager will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.</li> </ul>	To be finalized in Inception Phase and Workshop.	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on <i>output and implementation</i>	<ul style="list-style-type: none"> <li>▪ Oversight by Project Manager</li> <li>▪ Project team</li> </ul>	To be determined as part of the Annual Work Plan's preparation.	Annually prior to ARR/PIR and to the definition of annual work plans
ARR/PIR	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> <li>▪ UNDP EEG</li> </ul>	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> </ul>	None	Quarterly
Mid-term Evaluation	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ UNDP RCU</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost: 40,000	At the mid-point of project implementation.
Final Evaluation	<ul style="list-style-type: none"> <li>▪ Project manager and team,</li> <li>▪ UNDP CO</li> <li>▪ UNDP RCU</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost : 40,000	At least three months before the end of project implementation
Project Terminal Report	<ul style="list-style-type: none"> <li>▪ Project manager and team</li> <li>▪ UNDP CO</li> <li>▪ local consultant</li> </ul>	0	At least three months before the end of the project
Audit	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ Project manager and team</li> </ul>	Indicative cost per year: 3,000	Yearly
Visits to field sites	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ UNDP RCU (as appropriate)</li> <li>▪ Government representatives</li> </ul>	For GEF supported projects, paid from IA fees and operational budget	Yearly
<b>TOTAL indicative COST</b> Excluding project team staff time and UNDP staff and travel expenses		US\$ 187,000 (+/- 5% of total budget)	

## 6. LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

Audit Clause: The Audit will be conducted in accordance with [UNDP Financial Regulations and Rules and applicable audit policies on UNDP projects](#).

## 7. ANNEXES

**Annex 7-1  
OFFLINE RISK LOG**

#	Description	Date identified	Type	Impact & Probability	Countermeasures / Mgt response	Owner	Submitted, updated by	Last Update	Status
1	Slow progress of energy pricing reform		Political	EE appliances less attractive to the end users. P <sup>16</sup> = 3 I <sup>17</sup> = 4	Development of specific financing instruments and Government support schemes for the transition period by using public incentives for EE investments to compensate for subsidized tariffs (with zero net impact to the state budget)	Project Board		N/A	N/A
2	No or slow adoption of the proposed S&L scheme(s) by the Government		Political & Regulatory	No policy basis to drive the market transformation for more energy efficient appliances P = 3 I = 5	Demonstrating and justifying with required background analysis the national economic benefits of the proposed changes  Early involvement and ongoing policy dialogue with the Supreme Energy Council, the responsible line ministries and the entities affiliated with them  Sharing information on the energy and cost saving potential of the implementation of effective S&L schemes and related international experiences, including those from the past or ongoing successful GEF funded projects such as the Tunisia S&L project	Project Board		N/A	N/A
3.	Lack of inter-institutional ownership and co-operation in implementing the project activities		Political & Organizational	Targets for project activities requiring institutional co-operational and cross-sectoral ownership not met. P = 3 I = 4	Fostering the co-operation by early engagement of the key stakeholders and using of the Supreme Energy Council and Project Steering Committee as further platforms for raising related issues and, as applicable, concerns during project implementation	Project Board		N/A	N/A

<sup>16</sup> Probability from 1 (low) to 5 (high)

<sup>17</sup> Impact from 1 (low) to 5 (high)

4	The regulations adopted for S&L may not be effectively enforced.		Political & Organizational	Lower compliance and therefore lower impact of the adopted S&L schemes  P = 4 I = 4	The project will test enforcement models that are consistent with the existing resources, capacities and organisational responsibilities, and explore applicable incentives to promote effective enforcement of the standards and labels adopted together with the associated capacity building of the key stakeholders.	Project Board  National Project Manager		N/A	N/A
5	Government and/or other donors will not provide support & funds for new financing instruments		Financial	No or slower market transformation  P = 2 I = 4	Comprehensive economic analysis and early discussions with the Ministry of Finance with support of Ministry of Electricity and Environment  Policy dialogue at high level and development of required draft decrees for the consideration of the Supreme Council of Energy  For other donors, demonstrating the commitment of the Government of Egypt to establish and co-finance the proposed funding mechanism(s).  Donor coordination and opportunities provided by carbon financing	Project Board  National Project Manager		N/A	N/A
6	Lack of co-operation by the private sector		Strategic	Low level of compliance and implementation  P = 3 I = 3	By building on the relationships and trust established by the previous EEIGGR project, continuing dialogue and engagement of the private sector by recognizing the internationally changing market environment and identifying and pursuing the idea of new market opportunities and common benefits	National Project Manager (NPM) in co-operation with (EFI) Egyptian Federation of Industry.		N/A	N/A
7	Retailers are not willing to commit staff time to appliance S&L training		Strategic	Low level of compliance and implementation  P = 3 I = 3	The project will work with a limited number of retailers to demonstrate the impact of the training and to gradually raise the interest among other retailers. The training programs will be tailored to the needs of retailers (short, to the point and delivered in or close to their shops).	NPM		N/A	N/A
8	Lack of adequate and reliable		Organizational	Inadequate information for	Close cooperation with the equipment manufacturers, industry association and	NPM		N/A	N/A



	market data			<p>monitoring project impact and for planning new policy measures</p> <p>P = 4 I = 3</p>	<p>Government entities collecting related statistical information.</p> <p>For required additional data, specific surveys and/or other expanded data collection activities to be initiated.</p> <p>Cross-checking the reliability of the data by comparing the results from different sources and approaches (e.g. top-down / bottom-up).</p>				
9	Inadequate waste management and recycling of used electric appliances		Environmental	<p>Release of harmful substances (such as mercury and ODS) from used electric appliances to the environment</p> <p>P = 3 I = 3</p>	<p>Limiting the mercury content of EE lighting products (such as CFLs) by regulations taking into account international recommendations and “best practices”.</p> <p>Supporting the development of an improved waste management and recycling plan and leveraging additional financial resources for its implementation,</p> <p>In the case of programs supporting the replacement of old, inefficient electric appliances such as refrigerators and freezers, organising the collection of old appliances and the proper treatment / recycling of their harmful/useful substances before dumping.</p>	NPM			
10	Inadequate and/or non-capacitated human resources to successfully implement the project.		Operational	<p>Project not meeting the stated targets.</p> <p>P = 3 I = 5</p>	<p>Open tendering and thorough screening of the candidates applying for the posts as well as establishing partnerships with recognized international entities and/or individual experts with proven track record of successfully supporting similar actions in Egypt and in other countries.</p> <p>UNDP procurement procedures applied in a pragmatic and efficient way (within the allowed limits) to meet the project support requirements in a timely fashion and to ensure the highest professional level of the support provided.</p>	UNDP		N/A	N/A

## **Annex 7-2: Agreements**

The co-financing letters are included as separate annexes.

## **Annex 7-3: Terms of Reference**

### **Project Steering Committee (PSC)**

#### Duties and responsibilities:

The Project Steering Committee (PSC) is the main body to supervise the project implementation in accordance with UNDP rules and regulations and referring to the specific objectives and the outcomes of the project with their agreed performance indicators;

The main functions of the PSC are:

- General monitoring of the project progress in meeting of its objectives and outcomes and ensuring that they continue to be in line with the national development objectives;
- Facilitating the co-operation between the different Government entities, whose inputs are required for successful implementation of the project, ensuring access to the required information and resolving eventual conflict situations raising during the project implementation when trying to meet its outcomes and stated targets;
- Supporting the elaboration, processing and adoption of the required institutional, legal and regulatory changes to support the project objectives and overcoming of related barriers;
- Facilitating and supporting other measures to minimize the identified risks to project success, remove bottlenecks and resolve eventual conflicts;
- Approval of the annual work plans and progress reports, the first plan being prepared at the outset of project implementation;
- Approval of the project management arrangements; and
- Approval of any amendments to be made in the project strategy that may arise due to changing circumstances, after the careful analysis and discussion of the ways to solve problems.

#### PSC Structure and Reimbursement of Costs

The PSC will be chaired by the Project Director or other person assigned by the executing agency. The PSC will include a representative from the key Ministries and Agencies involved in the project, a representative of UNDP and, as applicable, representatives of project's other co-financing partners. Other members can be invited by the decision of the PSC, however by taking care that the PSC still remains operational by its size. The project manager will participate as a non-voting member in the PSC meetings. A draft list of the permanent members of the Project Steering Committee is provided under section III of the project document: "Project Management and Implementation Arrangements". Other participants can be invited into the PSC meetings by the decision of the PSC.

The costs of the PSC's work shall be considered as the Government's or other project partners' voluntary in-kind contribution to the project and shall not be paid separately by the project. Members of the PSC are also not eligible to receive any monetary compensation from their work as experts or advisers to the project.

#### Meetings

It is suggested that the PSC will meet at least twice a year, including the annual TPR meeting. A tentative schedule of the PSC meetings will be agreed as a part of the annual work plans, and all representatives of the PSC should be notified again in writing 14 days prior to the agreed date of the meeting. The meeting will be organized provided that the executing agency, UNDP and at least 2/3 of the other members of the PSC can confirm their attendance. The project manager shall distribute all materials associated with the meeting agenda at least 5 working days in prior to the meeting .

## **National Project Director**

As a representative of the Government and project's executing agency, the National Project Director has the main responsibility to ensure that the project is executed in accordance with the project document and the UNDP guidelines for nationally executed projects.

His/her main duties and responsibilities include:

- Supervising the work of the Project Manager through meetings at regular intervals to receive project progress reports and provide guidance on policy issues;
- Certifying the annual and, as applicable, quarterly work plans, financial reports and requests for advance of funds, ensuring their accuracy and consistency with the project document and its agreed amendments;
- Authorizing the project contracts, following the approval of UNDP;
- Unless otherwise agreed, chairing the Project Steering Committee and representing the project in other required meetings;
- Taking the lead in developing linkages with the relevant authorities at national, provincial and governmental level and supporting the project in resolving any institutional or policy related conflicts that may emerge during its implementation;

## **Project Manager (full-time)**

Duties and responsibilities:

Operational project management in accordance with the project document and the UNDP guidelines and procedures for nationally executed projects, including:

- General coordination, management and supervision of project implementation;
- Managing the procurement and the project budget under the supervision of the Executing Agency and with support from UNDP to assure timely involvement of local and international experts, organisation of training and public outreach, purchase of required equipment etc. in accordance with UNDP rules and procedures;
- Submission of annual Project Implementation Reviews and other required progress reports (such as QPRs) to the PSC, Executing Agency and the UNDP in accordance with the section "Monitoring and Evaluation" of the project document;
- Ensuring effective dissemination of and access to information on project activities and results, (including an regularly updated project website);
- Supervising and coordinating the contracts of the experts working for the project;
- As applicable, communicating with project's international partners and attracting additional financing in order to fulfill the project objectives; and
- Ensuring otherwise successful completion of the project in accordance with the stated outcomes and performance indicators summarized in the project's logframe matrix and within the planned schedule and budget.

Expected Qualifications:

- Advanced university degree and at least 10 years of professional experience in the specific areas the project is dealing with, including solid knowledge of international experiences, state of the art approaches and best practices in appliance energy efficiency standards and labels and their sustainable promotion (by applying different policy measures, new financing mechanisms etc.)
- Experience in managing projects of similar complexity and nature, including demonstrated capacity to actively explore new, innovative implementation and financing mechanisms to achieve the project objective;

- Demonstrated experience and success in the engagement of and working with the private sector and NGOs, creating partnerships and leveraging financing for activities of common interest;
- Good analytical and problem solving skills and the related ability to adaptive management with prompt action on the conclusion and recommendations coming out from the project's regular monitoring and self-assessment activities as well as from periodical external evaluations;
- Ability and demonstrated success to work in a team, to effectively organise it works and to motivate its members and other project counterparts to effectively work towards the project's objective and expected outcomes;.
- Good communication skills and competence in handling project's external relations at all levels; and
- Fluency in English and Arabic languages
- Familiarity and prior experience with UNDP and GEF requirements and procedures are considered as an asset

### **Project Assistant (full-time)**

#### Duties and responsibilities:

- Supporting the project manager in the implementation of the project, including:
- Responsibility for logistics and administrative support of the project implementation, including administrative management of the project budget, required procurement support etc.
- Maintaining the business and financial documentation up to date, in accordance with UNDP and other project reporting requirements;
- Organizing meetings, business correspondence and other communication with the project partners;
- Supporting the project outreach and PR activities in general, including keeping of the project web-site up to date;
- Managing the projects files and supporting the project manager in preparing the required financial and other reports required for monitoring and supervision of the project progress;
- Supporting the project manager in managing the contracts, in organizing correspondence and in ensuring effective implementation of the project otherwise

#### Expected Qualifications:

- Fluent in English and Arabic languages
- Demonstrated experience and success of work in a similar position
- Good administration and interpersonal skills
- Ability to work effectively under pressure
- Good computer skills



## **International Project Adviser and Energy Efficiency Appliance Policy Expert (part-time)**

### **Duties and Responsibilities:**

Support UNDP and the project management to monitor the progress of the project and its different sub-components, and, as needed, build the capacity of the local experts working for the project to successfully implement the project activities, ensuring that they comply with the agreed benchmarks and success indicators of the project as well as international best practices and lessons learnt.

The specific responsibilities include, among others, to:

- support the local project team in organising the implementation of the different sub-components of the project at the inception phase and after that, including support to the project manager in the preparation of the project inception report and the annual work plans, drafting of Terms of Reference for the national and, as needed, additional international experts and subcontractors, required tender documents etc;
- review the existing appliance policies and identify gaps and propose changes by taking into account the most recent international developments in this field;
- support the local expert(s) in drafting recommended policy changes and in organizing training to build the capacity of the local stakeholders for designing, analysing the impact and implementing effective EE appliance policies;
- propose methodologies and specific software models for market monitoring and for assessing the impact of the project and the adopted policies in terms of energy savings and GHG reduction.
- support the project manager in supervising the work of the contracted individual experts and companies, including review of the feasibility studies and the technical design, financing and implementation arrangements of the planned pilot projects;
- support the project manager in arranging co-operation with the current project partners and, as applicable, in establishing new, additional national and/or international partnerships to support the project goals and objectives;
- support the local project team in monitoring and evaluating the performance and outcome of the pilot projects under implementation;
- monitor the progress of the project and participate in the development of periodic progress reviews and, as applicable, the annual Project Implementation Reviews;
- train personally or, as needed, organize other training for the local stakeholders to successfully implement the project and to meet its capacity building objectives; and
- provide other advice on the required institutional, legal and regulatory changes to support the reaching of the stated outcomes of the project and provide other required advice on the successful implementation of the specific project subcomponents and activities by drawing from the international lessons learnt and best practices.

### **Expected Qualifications:**

- a university degree in energy, environment or engineering;
- demonstrated experience and success in supporting similar projects (or its sub-components) in other GEF programme countries;
- good knowledge of international experiences, state of the art approaches and best practices in the specific areas the project and its subcomponents are dealing with;
- good analytical skills and effective communication and training skills and competence in handling external relations at all levels;
- ability to work in a team and to motivate other team members and counterparts;
- fluency in English, including the ability to draft and edit required project documentation
- familiarity with UNDP and GEF requirements is considered an asset.

#### Annex 7-4: Greenhouse Gas Emission Reduction Analysis

The GHG emissions reduction analysis described here was conducted using a specially developed bottom-up end-use energy demand model, which simulates the consumption of each electrical end-use considered for standards and labelling and direct financial incentive measures through the project. The model is populated with data on the stock, sales, energy efficiency and duty cycles (typical usage patterns) of each electrical equipment type considered under the project. This data is derived from diverse sources including surveys of equipment energy use in households, energy efficiency test data, national statistics (imports/exports, demographics/socio-economic data, electricity consumption by sector), sales data from industry sources and market research companies and data on consumption of similar equipment in other economies. The data are entered into the stock model and calibrated to ensure the aggregate electricity demand is consistent with the macro-level consumption by major electricity-consuming sectors and then projected into the future using independently produced projections of households and sector economic activity. When combined with assumptions about autonomous energy efficiency improvements this leads to a baseline increase in electricity demand of 5.7% per annum from 2010 to 2030 for all the electrical equipment considered in the project at the national level, which is consistent with (actually slightly lower than) historical demand increases of about 6-7% per annum. This baseline projection is also consistent with what has occurred in other economies around the world when transitioning through similar development stages as Egypt is currently undergoing. Some of this future increase in demand is driven by a continuing increase in the level of electrification but most is driven by ongoing rapid growth in population, economic activity and associated equipment ownership and usage levels.

The grid emission factor employed is 0.56 tCO<sub>2</sub>eq/kWh, calculated on the basis of the reported fuel consumption of Egyptian power plants and the net electricity consumption in 2007/2008 (thereby taking into account both the generation and distribution losses) as per the annual report of EEHC and the IPCC emissions factors from 2006.

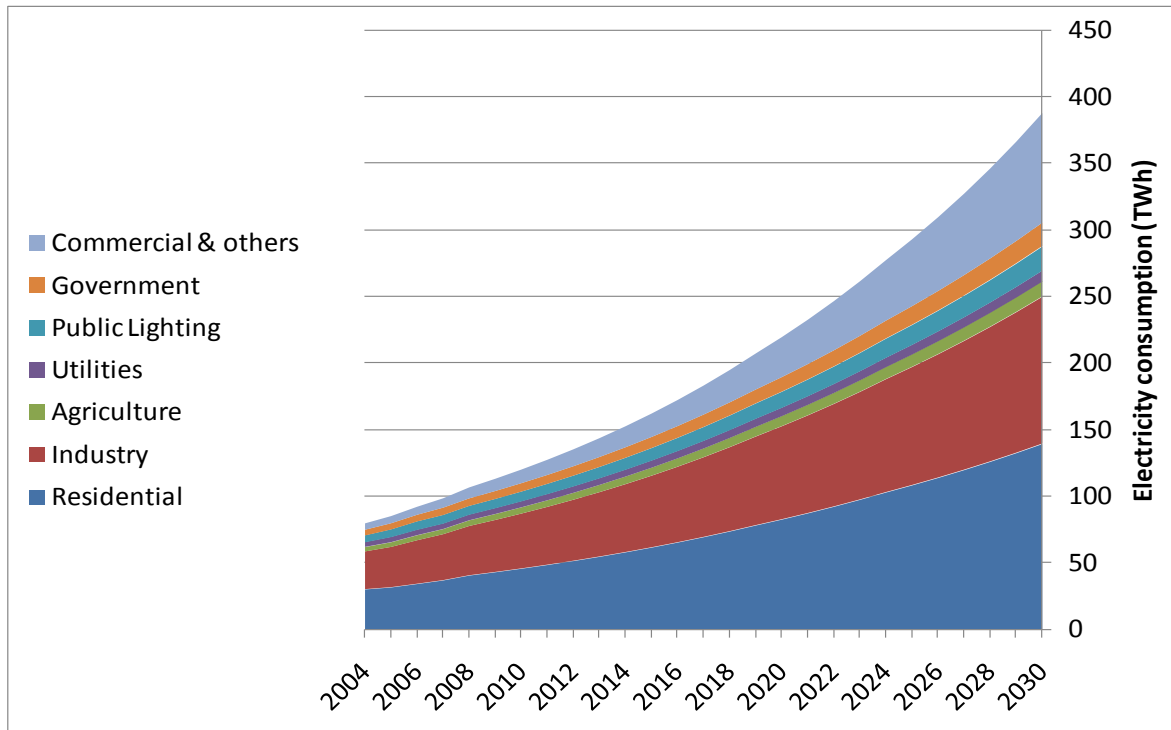
The GHG emissions reduction approach reflects the standard GEF methodology, differentiating between direct and indirect emissions and using a causality factor for the latter.

The cumulative **direct GHG reduction benefits** of the project are estimated at 0.95 Mt of CO<sub>2</sub>eq, resulting from the agreed financial support schemes for EE lighting and calculated over the expected lifetime of the appliances sold under these schemes. The project may also result in direct post-project GHG reduction benefits, but given the nature of the financial support mechanisms agreed so far, they cannot yet be accurately predicted or quantified. The cumulative **indirect GHG reduction benefits** of the project to 2025 have been estimated at the upper end to be 176 Mt of CO<sub>2</sub>eq and at the lower end to be roughly half of this – i.e. 88 Mt of CO<sub>2</sub>eq. This is calculated from the estimated incremental increase in energy efficiency and associated reduction of unit energy consumption of new appliances and equipment sold between 2010 and 2025 that are expected to result from the broadening and strengthening of the standards and labelling schemes implemented through the project. In general, the upper projected savings are predicated on the assumption that Egypt ultimately moves to adopt standards and labelling requirements, which are harmonised with those in the EU, but with implementation delayed several years compared with the EU. It is further assumed that compliance with the adopted measures is reasonably high due to the robustness of the strengthened compliance activities supported through the project. It also takes account of the impact of specific promotional campaigns and other “flanking” measures associated with them. For the lower end savings projection, it is assumed that less stringent measures are adopted and/or that the level of compliance is relatively weak. This has the effect of halving the overall savings. With a causality factor of 60%, the cumulative indirect GHG savings until 2025 for the lower-end scenario can be estimated at 53 Mt of CO<sub>2</sub>eq, which has been considered as the expected minimum indirect cumulative impact of the successful project implementation over the period 2011-2025 i.e. from the project start until ten years after its expected closure.

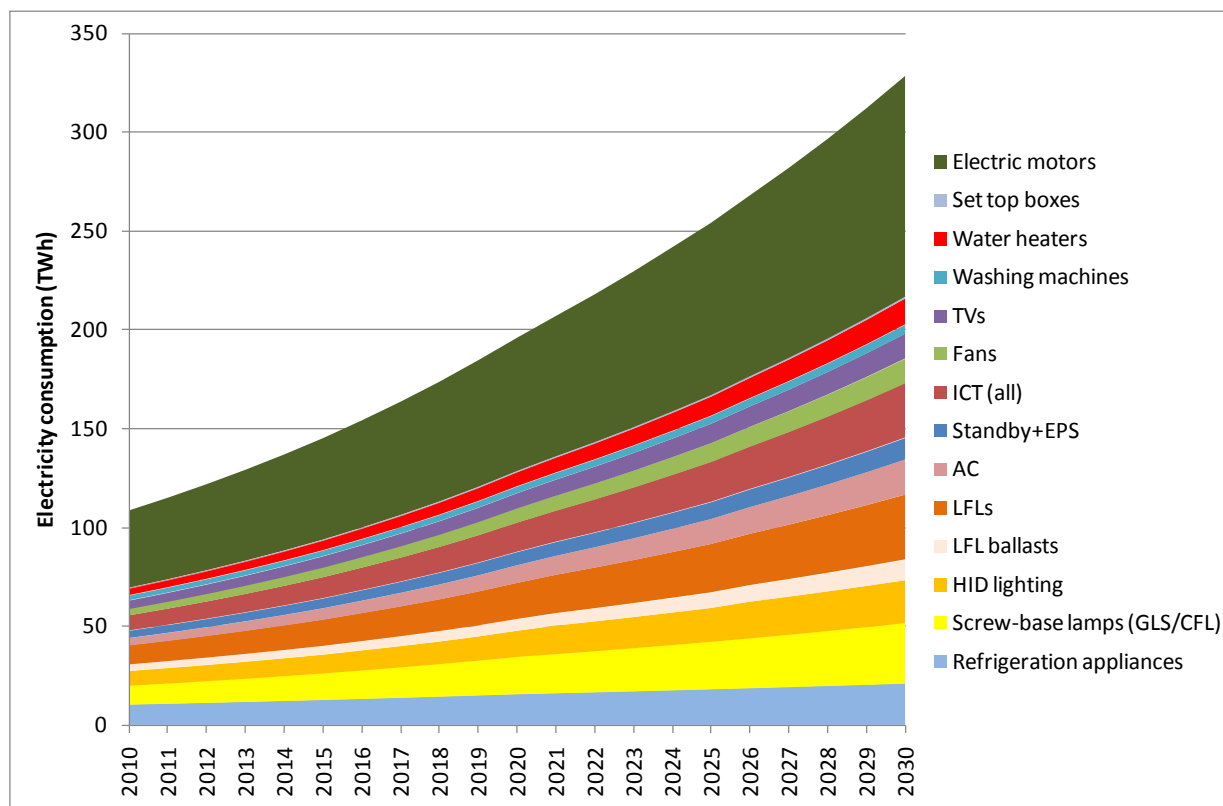
### **Baseline scenario**

Under the baseline scenario, overall electricity demand in Egypt is projected to grow as shown in Figure 1. The share of electricity taken by each of the end-uses considered the highest targets for strengthened standards and labelling measures are shown in Figure 2. These products represent 90% of total electricity demand in 2010, 89% in 2020 and 85% in 2030.

**Figure 1 Forecast growth in electricity demand by sector in Egypt under the baseline scenario**



**Figure 2 Forecast growth in electricity demand by equipment type to be addressed under the project in Egypt under the baseline scenario**



### Upper-Case policy scenario

#### **Assumptions, rationale and energy efficiency impacts**

In the upper-case policy scenario, it is assumed that Egypt adopts the minimum energy efficiency standards already adopted or about to be adopted in the EU under the auspices of the EU Ecodesign Directive<sup>18</sup>. It is assumed that implementation of these measures is considerably delayed in Egypt compared to the EU by typically 5-8 years. The rationale for considering adopting efficiency requirements harmonised with the EU is as follows:

- Egypt and the EU should enter into a free trade agreement by 2019.
- The requirements are demonstrably feasible from a technical perspective (they simply require Egypt to replicate what has already been done in the EU) and involve the use of known technologies and production processes
- It supports Egypt's industrial policy by ensuring locally produced products can also be sold in EU markets and thereby encourages domestic producers to become exporters while simultaneously positioning Egypt as a competitive centre for equipment production for both the EU and domestic market.
- The energy savings are very significant and hence of high value. Overall, they represent 13% of projected national electricity demand by 2020 and 17% by 2030.

<sup>18</sup> DIRECTIVE 2005/32/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products and amending Council Directive 92/42/EEC and Directives 96/57/EC and 2000/55/EC of the European Parliament and of the Council.

The precise assumptions for each equipment type considered are set out below.

### **Refrigerators and freezers:**

MEPS for refrigerators and freezers are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule delayed by 29 months over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 643/2009 of 22 July 2009). In practice, this means that appliances sold in Egypt would have to meet the first set of energy efficiency requirements (MEPS set at the EU energy class A) by end-2012 and a second set from the end of 2015 (at EU energy class A+).

The effect of adopting these measures is estimated to improve the average efficiency of new refrigeration appliances sold in Egypt by 10% from 2013 and 30% from 2016 onwards compared with the levels in the baseline scenario.

### **Incandescent lamps (GLS) and Compact Fluorescent Lamps (CFLi)**

MEPS for non-directional household lamps are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule delayed by 6 years and 9 months over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 244/2009 of 18 March 2009). In practice, this means that household lamps (including GLS, non-directional halogen lamps and CFLs) sold in Egypt would have to meet six staged energy efficiency requirements commencing from July 2016 and completing by July 2023. Under these provisions, a significant proportion of GLS are phased-out in July 2016 (all opaque GLS and any clear GLS of 100W and above) and all GLS are phased-out by July 2020. All but the most energy efficient halogen lamps are phased-out by July 2023.

The effect of these measures is estimated to reduce the energy consumption of the stock of household lamps in Egypt by 44% by 2020 and 55% by 2030 compared to that in the baseline scenario.

### **Linear Fluorescent Lamps (LFL) and ballasts**

MEPS for LFL and their ballasts are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule delayed by 33 months over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 245/2009 of 18 March 2009). In practice, this means that:

- Linear fluorescent lamps sold in Egypt would have to meet the first set of energy efficiency requirements by the end of 2012, a second set by the end of 2014 and a third by the end of 2019.
- Linear fluorescent lamp ballasts sold in Egypt would have to meet the first set of energy efficiency requirements by the end of 2012, a second set by the end of 2014 and a third by the end of 2019.

The effect of these measures is estimated to ultimately improve the average efficiency of new fluorescent lamps and ballasts sold in Egypt by 10% and 30% respectively compared with the levels in the baseline scenario.

### **HID lamps and ballasts**

MEPS for HID lamps and their ballasts are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule delayed by 33 months over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 245/2009 of 18 March 2009). In practice, this means that HID lamp and ballasts sold in Egypt would have to meet the first set of energy efficiency requirements by the end of 2014 and a second set by the end of 2019. HID ballasts sold in Egypt would have to meet the first set of energy efficiency requirements by the end of 2012, a second set by the end of 2014 and a third by the end of 2019.



The effect of these measures is estimated to improve the average efficiency of new HID lamps and ballasts sold in Egypt by 20% and 15% respectively compared with the levels in the baseline scenario.

## **TVs**

MEPS for all TVs are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with an implementation schedule delayed by 18 months over that set out below:

“COMMISSION REGULATION (EC) No 642/2009 of 22 July 2009 The ecodesign requirements set out in point 1 of Part 1, Part 3, Part 4, and point 2 of Part 5 of Annex I shall apply from 20 August 2010.

- The ecodesign requirements set out in point 2, Part 1 of Annex I shall apply from 1 April 2012.
- The ecodesign requirements set out in points 1(a) to 1(d) of Part 2 of Annex I shall apply from 7 January 2010.
- The ecodesign requirements set out in points 2(a) to 2(e) of Part 2 of Annex I shall apply from 20 August 2011.”

In practice, this means that TVs sold in Egypt would need to satisfy minimum energy performance requirements implemented progressively from July 2012 to September 2013.

The effect of these measures is estimated to improve average efficiency of new TVs sold in Egypt by 15% compared with the levels in the baseline scenario.

## **Set-top boxes**

MEPS for “simple” set-top boxes are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule is delayed by 30 months over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 107/2009 of 4 February 2009). In practice, this means that set-top boxes sold in Egypt would have to meet the first set of energy efficiency requirements by July 2013 and a second set from July 2015.

The effect of these measures is estimated to improve the average efficiency of new set-top boxes sold in Egypt by 35% compared with the levels in the baseline scenario.

## **External Power Supplies (EPS)**

MEPS for External Power Supplies are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule delayed by 20 months over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 278/2009 of 6 April 2009). In practice, this means that EPSs sold in Egypt would have to meet the first set of energy efficiency requirements by the end of 2012 and a second set by the end of 2013.

The effect of these measures is estimated to improve the average efficiency of new EPSs sold in Egypt by 29% compared with the levels in the baseline scenario.

## **Standby power**

MEPS for products consuming power in standby mode are adopted at the end of 2011. A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule delayed by 3 years over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 1275/2008 of 17 December 2008). In practice, this means that products consuming energy in standby sold in Egypt would have to meet the first set of energy efficiency requirements by the end of 2012 and a second set by the end of 2016.

The effect of these measures is estimated to reduce the average standby power loads of new products sold in Egypt by 30% compared with the levels in the baseline scenario.

## **Room Air Conditioners**

It is assumed that the EU adopts MEPS for room air conditioners in September 2010 (based on current regulatory discussions) that will enter into force in September 2012. For Egypt it is assumed that the same MEPS take effect from September 2015. These are assumed to require products to meet an energy efficiency ratio of 3.0 W/W or better under steady state test conditions as set out in ISO 5151.

The effect of these measures is estimated to improve the average efficiency of new room air conditioners sold in Egypt by 25% compared with the levels in the baseline scenario.

## **Electric storage water heaters**

It is assumed that the EU adopts MEPS for electric storage water heaters in December 2010 (based on current regulatory discussions) that will enter into force in December 2012. For Egypt it is assumed that the same MEPS take effect from December 2015.

The effect of these measures is estimated to improve the average efficiency of new water heaters sold in Egypt by 8% compared with the levels in the baseline scenario.

## **Fans**

It is assumed that the EU adopts MEPS for electric fans in December 2010 (based on current regulatory discussions) that will enter into force in December 2012. For Egypt it is assumed that the same MEPS take effect from December 2015.

The effect of these measures is estimated to improve average efficiency of new fans sold in Egypt by 20% compared with the levels in the baseline scenario.

## **Washing machines**

It is assumed that the EU adopts MEPS for washing machines in December 2010 (based on current regulatory discussions) that will enter into force in December 2012. For Egypt it is assumed that the same MEPS take effect from December 2015.

The effect of these measures is estimated to require new clothes washers to meet the EU energy label class A and thereby improve average efficiency of new washing machines sold in Egypt by 15% compared with the levels in the baseline scenario.

## **ICT**

It is assumed that the EU adopts MEPS for information and communication technology (ICT) such as computers and monitors in December 2010 (based on current regulatory discussions) and that these will enter into force in December 2012. For Egypt it is assumed that the same MEPS take effect from December 2015.

The effect of these measures is estimated to require new ICT equipment sold in Egypt to be 15% more energy efficient on average after the regulations come into effect compared with the levels in the baseline scenario.

## **Electric motors**

MEPS for electric motors are adopted at the end of 2013 (this delay is to allow test labs to be built). A priori it is expected these will be in line with current EUP Directive requirements but with the implementation schedule delayed by 41 months over that set out in the EUP Directive (COMMISSION REGULATION (EC) No 640/2009 of 22 July 2009). In practice, this means that motors sold in Egypt would have to meet the first set of energy efficiency requirements (IEC energy efficiency class IE2) by July 2014 and the second set (IEC energy efficiency class IE3) by July 2018.

The effect of these measures is estimated to improve the average efficiency of new motors sold in Egypt by 3.5% compared with the levels in the baseline scenario.

## **Compliance**

In the upper-case scenario compliance with the energy efficiency requirements adopted above is assumed to be reasonably good (i.e. within 10% of the requirement on average). This presumes that the project successfully implements effective compliance structures building upon the existing infrastructure but considerably strengthening it. At present, government-operated test laboratories exist for: refrigerators and freezers, washing machines, room air conditioners, water heaters and certain lighting products. It is assumed that these labs and testing arrangements continue to operate and that some improvements are made in the quality of the testing and the facilities through the course of the project. For all the other equipment types it will be necessary to establish test labs to allow third party testing for compliance purposes. This is the case for:

- Electric motors
- ICT and standby power
- TVs and set top boxes
- Fans
- Ballasts
- HID lamps

The development of these labs requires new resources to be allocated through the project structure and is thus one of the main project activities.

To improve the quality and reliability of equipment testing in Egypt it is also important to conduct cross testing with other international labs and to ensure labs are accredited against international requirements. This requires specific additional resources to be allocated within the project.

In addition to the above it is assumed the project results in the development and implementation of:

- A sustainable long-term funding mechanism to cover the cost of regular product testing to both certify the performance of new products placed on the market and to do random compliance testing of products at the point of sale.
- An effective, fully mandated and sustainably funded point of sale inspection mechanism to ensure products are correctly labeled
- Modification of the legal framework to introduce a clear compliance determination pathway, legal mandates for institutions involved in compliance assessment and appropriate penalties for non compliance for all parties in the supply chain (producers, importers, distributors and retailers)

If the above elements are successfully implemented, it is estimated average equipment energy performance levels can be maintained within 10% of the required levels, which is the assumed level of compliance for the GHG reduction analysis for the Upper Case scenario.

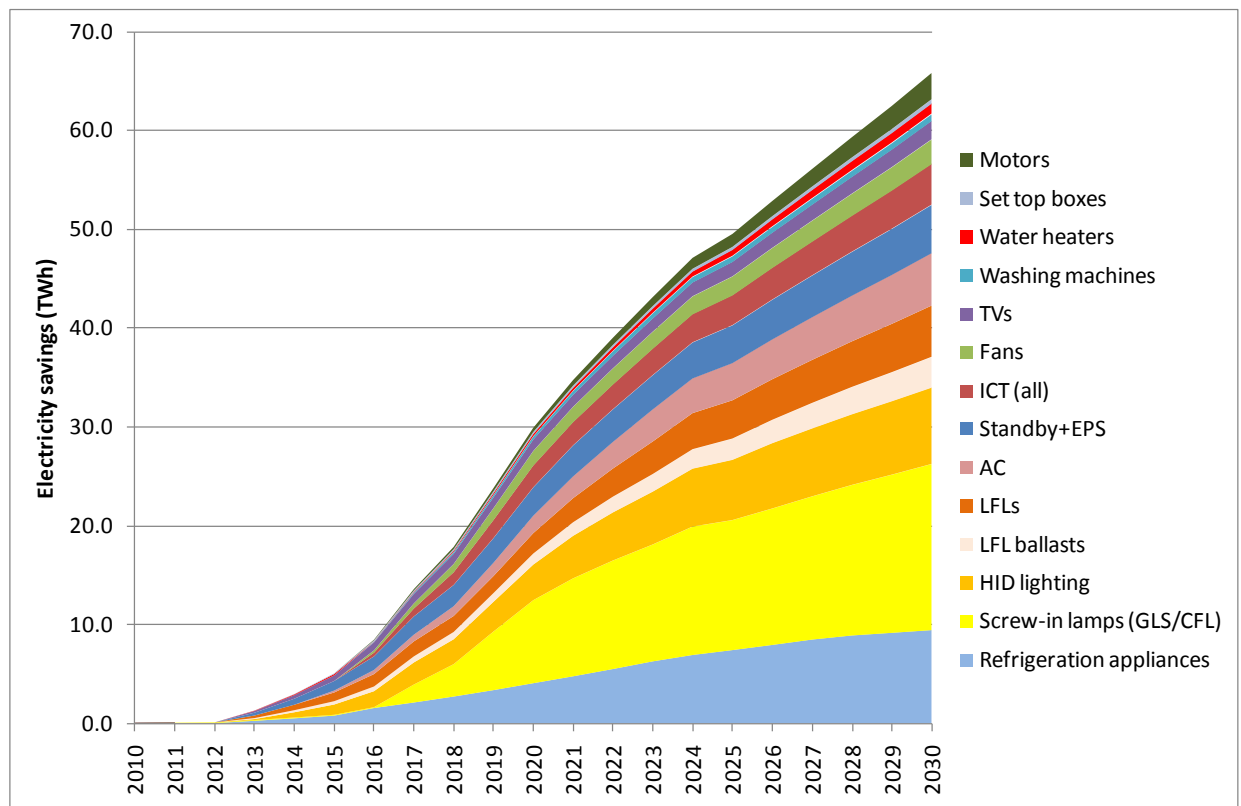
## **Impacts**

The Upper-Case scenario projected electricity savings by each electrical end-use are shown in Figure 3. The CO<sub>2</sub> savings, which are proportional to these, are shown in Table 1 and Figure 4. The greatest savings are from increased energy efficiency in lighting and especially from phasing out incandescent lamps in favour of higher efficiency options such as CFLs; however, the combined savings from the efficiency gains in the other lighting equipment (HIDs, fluorescent lamps and ballasts) are of a similar overall magnitude. Other large savings are for the end-uses of: refrigerators and freezers, air conditioners, standby power, ICT, fans, electric motors and TVs.

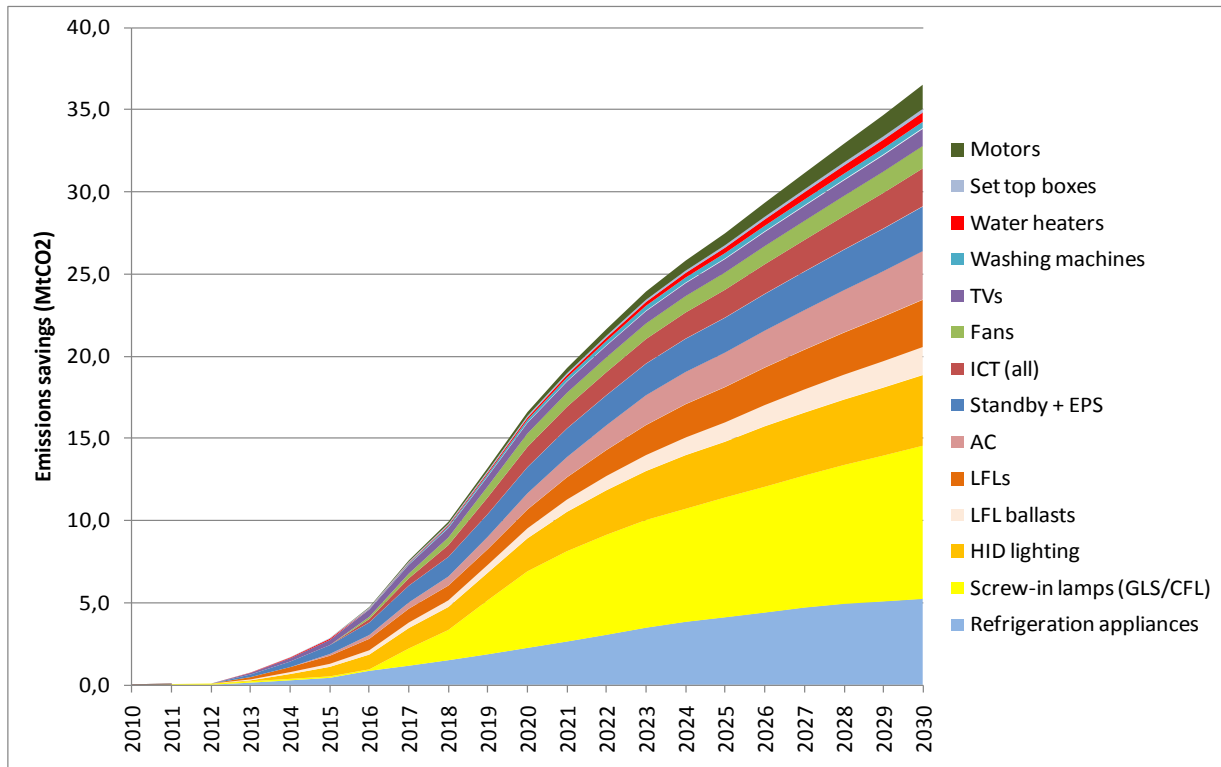
**Table 1 Forecast CO<sub>2</sub> savings by end-use (Mt): Upper-Case scenario**

	2020	Share	2030	Share
Refrigeration appliances	2.6	13.5%	6.1	14.3%
Screw-in lamps (GLS/CFL)	5.5	28.1%	10.9	25.5%
HID lighting	2.4	12.1%	5.0	11.8%
LFL ballasts	0.7	3.7%	2.0	4.7%
LFLs	1.3	6.9%	3.4	7.9%
AC	1.2	5.9%	3.5	8.1%
Standby and EPS	1.9	9.6%	3.2	7.4%
ICT (all)	1.4	7.4%	2.7	6.3%
Fans	1.0	5.0%	1.6	3.8%
TVs	0.8	3.9%	1.2	2.8%
Washing machines	0.2	1.0%	0.4	1.0%
Water heaters	0.1	0.8%	0.7	1.6%
Set top boxes	0.1	0.7%	0.3	0.7%
Motors	0.3	1.4%	1.7	4.0%
<b>Total</b>	<b>19.5</b>	<b>100.0%</b>	<b>42.9</b>	<b>100.0%</b>

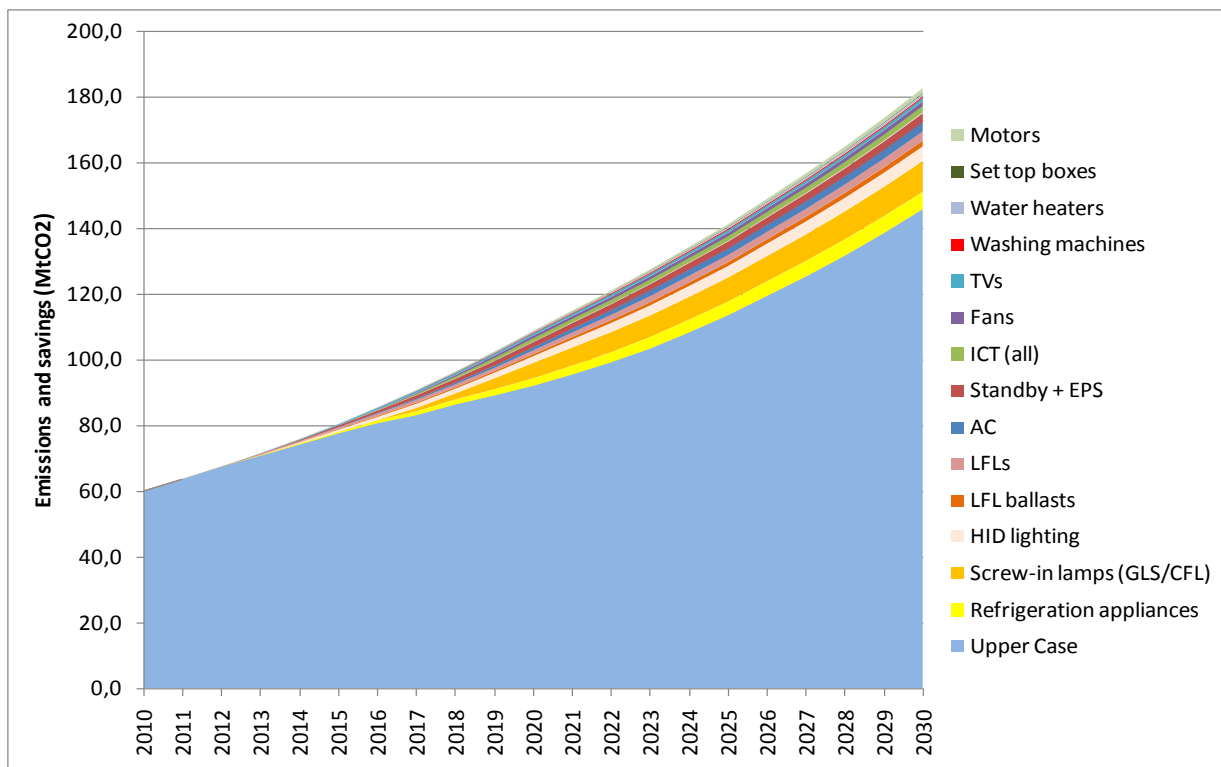
**Figure 3 Forecast electricity savings by end-use: Upper-Case scenario**



**Figure 4 Forecast CO<sub>2</sub> savings by end-use: Upper-Case scenario**



**Figure 5 Forecast electricity sector CO<sub>2</sub> emission and savings by end-use for the Upper-Case scenario compared with the Baseline scenario**



## Direct and indirect savings potentials

The figures shown above are an amalgam of the direct and indirect savings. The direct savings are derived from financial incentives of EGY£18 million given to subsidise compact fluorescent lamps (CFLs), and thereby displace GLS (incandescent) lamp sales during project implementation; and from financial incentives of EGY£50 million given to install efficient street lights. In the case of the CFLs, it is assumed that each CFL is subsidised to a level between EGY£6 and EGY£4 (roughly half the market price) and that this results in some 3.6 million CFLs entering the stock in Egyptian households. This displaces demand for 26 million GLS sales because GLS lamps last for only about 650 hours in Egypt (the local products are very poor quality) whereas it is conservatively assumed that the CFLs last for an average of 4,700 hours (life-spans of up to 8,000 hours are quite normal for high-quality CFLs but for various reasons a lower lifespan is assumed here; however, if it is possible to source only very high quality CFLs the impacts could be increased by a factor of 1.7).

The effect of this substitution of GLS is to save 0.67 TWh of cumulative electricity demand and avoid 0.37 Mt of CO<sub>2</sub> emissions<sup>19</sup>. This translates as a cost per kWh saved of just EGY£0.027 (US\$0.005). In terms of abatement costs<sup>20</sup> it is US\$8.6 per tonne of CO<sub>2</sub>. There is considerable certainty about these impacts and costs because the measure is a simple continuation of the previous project which successfully increased CFL sales by 6.5 million lamps at an average subsidy of EGY£6 per lamp.

In the case of the street lighting project there is less certainty because many aspects of the project are still to be determined. For the purposes of this analysis very conservative assumptions are made as follows:

400W mercury vapour lamps and ballasts are replaced by 250W HPS son lamps and ballasts to produce an equivalent light output.

The cost per street light of this change is EGY£1050 (US\$190) as it is assumed that the lamp, ballast and luminaire need to be replaced; however, these costs are discounted to EGY£840 (US\$150) per street light for bulk purchase.

The lifetime of the measure is about 25 years for the luminaire, 12.5 years for the ballast and 4.5 years for the lamp; however, the incremental cost of the HPS lamp over the mercury vapour is very low compared to the other costs.

Overall, it is assumed that 60,000 street lights are replaced within 5 years and that this saves 52 GWh/year from 2016 to 2030. This saves 1.04 TWh of electricity to 2030 and some 0.58 Mt of CO<sub>2</sub>. Other co-benefits include:

- A clear determination of the most appropriate and efficient street lighting options in Egypt
- The development of technical know-how and guidelines on the procurement, installation, operation and maintenance of street lighting
- Priming demand for high-efficiency street lighting solutions in Egypt and thereby stimulating manufacturing base and the ESCO sectors

In the Upper-Case scenario the indirect savings from broader, more demanding and better enforced standards and labelling efforts are sixty times greater than the direct savings by the end of 2020 and over three hundred and fifty times greater if the time-frame is extended to 2030. Nonetheless, the indirect efforts form an important part of the market and consensus building needed to successfully implement the project.

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<sup>19</sup> Using a grid emission factor of 0.56 tCO<sub>2eq</sub>/kWh calculated on the basis of the reported fuel consumption of Egyptian power plants and the net electricity consumption in 2007/2008 (thereby taking into account both the generation and distribution losses) as per the annual report of EEHC and the IPCC emissions factors from 2006.

<sup>20</sup> Concerning the Government cash contribution of LE 18 million.

## **Elements of conservatism**

The main element of conservatism in the Upper-Case scenario is to only consider the impact of minimum energy efficiency standards and not the combined impact of minimum energy efficiency standards and energy labelling. The reason for this is that estimating the impacts of minimum energy efficiency standards is more straightforward and requires fewer assumptions to be made than estimating the additional impact of energy labelling. Nonetheless, the full project should attempt to assess the impacts of MEPS and labelling and to monitor the impact of both.

## **Uncertainties**

There are several sources of uncertainty in the above projections. First, the quality of the input data varies substantially and much work needs to be done to gather more comprehensive and internally consistent data during the course of the project to enable much greater certainty in project impact assessment and to assist in future design and compliance activities. Strengthening data breadth and quality is one of the key priorities for the new project. Second, there is uncertainty about future demographic and economic trends including household numbers, electrification rates, commercial sector activity and industrial sector activity levels. Third, there is uncertainty about actual equipment usage patterns and duty cycles. Fourth, in some cases there is significant uncertainty about the current energy efficiency of new products sold in Egypt. Fifth, there is uncertainty about the outcome of the feasibility and techno-economic assessments that will be conducted under the project and the resulting recommendations that will be made regarding minimum energy performance standards and energy labelling efficiency thresholds. Sixth, there is uncertainty about the political process and the speed of adoption of legislation. Seventh, there is uncertainty about national resource allocations and the ability of the state to create an effective properly resourced compliance structure. Clearly, the proposed project is necessary to help minimise these uncertainties and to progress the whole standards and labelling effort in Egypt; however, it is not possible to be sure about the impacts of the project at this stage, and this is why Upper and Lower Case scenarios are presented.

The assumptions regarding the Upper-Case scenario in respect to the above factors have already been documented. Those for the Lower-Case scenario are set out below.

## **Lower-Case policy scenario**

The simple assumption of the Lower-Case policy scenario is that for a variety of reasons associated with the project uncertainties set out above the project is only half as effective in improving equipment energy efficiency and reducing greenhouse gas emissions as in the Upper-Case scenario. The causes could be any combination of slower implementation of measures, less stringent policy settings, and poorer compliance.

The direct savings estimates are the same in the Lower-Case policy scenario as in the Upper-Case scenario.



**Annex 7-5 Schedule for planned Minimum Energy Performance Standards and their entry into force for the targeted appliances**

	End of 2011	End of 2012	End of 2013	End of 2014	End of 2015	End of 2016	End of 2017	End of 2018	End of 2019	End of 2020
<b>Refrigerators and freezers</b>	MEPS regulation adopted	1 <sup>st</sup> stage entering into force			2 <sup>nd</sup> stage entering into force					
<b>Incandescent lamps (GLS) and Compact fluorescent lamps (CFLs)</b>	MEPS regulation adopted					1 <sup>st</sup> stage entering into force in July 2016				Complete phase out of GLS by July 2020
<b>Linear fluorescent lamps (LFLs) and ballast</b>	MEPS regulation adopted	1 <sup>st</sup> stage entering into force		2 <sup>nd</sup> stage entering into force					3 <sup>rd</sup> stage entering into force	
<b>HID lamps</b>	MEPS regulation adopted			1 <sup>st</sup> stage entering into force					2 <sup>nd</sup> stage entering into force	
<b>HID ballast</b>	MEPS regulation adopted	1 <sup>st</sup> stage entering into force		2 <sup>nd</sup> stage entering into force					3 <sup>rd</sup> stage entering into force	
<b>TVs</b>	MEPS regulation adopted	Entering progressively into force between July 2012 and September 2013								
<b>Set-top boxes</b>	MEPS regulation adopted		1 <sup>st</sup> stage entering into force by July 2013		2 <sup>nd</sup> stage entering into force from July 2015					
<b>External power supplies (EPS)</b>	MEPS regulation adopted	1 <sup>st</sup> stage entering into force	2 <sup>nd</sup> stage entering into force							
<b>Standby power</b>	MEPS regulation adopted	1 <sup>st</sup> stage entering into force				2 <sup>nd</sup> stage entering into force				
<b>Room air conditioners</b>		MEPS regulation adopted			Entering into force					
<b>Electric storage water heaters</b>		MEPS regulation adopted			Entering into force					
<b>Fans</b>		MEPS regulation adopted			Entering into force					
<b>Washing machines</b>		MEPS regulation adopted			Entering into force					
<b>ICT</b>		MEPS regulation adopted			Entering into force					
<b>Electric motors</b>			MEPS regulation adopted	1 <sup>st</sup> stage entering into force				2 <sup>nd</sup> stage entering into force		

## Annex 7-6: Baseline and target energy efficiency improvements by 2020

The purpose of this annex is to clarify the target energy efficiency levels compared to the baseline energy efficiency levels that it is expected products would meet under the auspices of this project for the purposes of project progress assessment and evaluation. The target energy efficiency levels and baseline levels specified below apply to the year 2020.

Product	Baseline assumption	Target
<b>Refrigerators and freezers</b>	On average refrigerators and freezers sold in Egypt attain an energy efficiency index of 55% (i.e. an EU energy label class A)	All refrigerators and freezers sold in Egypt attain an energy efficiency index of <42% (i.e. an EU energy label class A+ or better)
<b>Incandescent lamps (GLS) and Compact Fluorescent Lamps (CFLi)</b>	GLS account for 94% of all screw- and bayonet-based lamps sales (i.e. of the total of GLS and CFLi sales)	GLS account for 42% of all screw- and bayonet-based lamps sales (i.e. of the total of GLS and CFLi sales) and CFLi or alternative technologies that are equally or more efficient account for the rest. Note, that the expectation is that sales of GLS would be completely phased out by July 2020 so there would be no legal GLS sales in 2021
<b>Linear Fluorescent Lamps (LFL) and ballasts</b>	On average fluorescent lamps and ballasts sold in Egypt are respectively 10% and 30% less energy efficient than the minimum requirements specified in the EU Directive (COMMISSION REGULATION (EC) No 245/2009 of 18 March 2009)	All fluorescent lamps and ballasts sold in Egypt meet the energy efficiency requirements set out in the EU Directive (COMMISSION REGULATION (EC) No 245/2009 of 18 March 2009)
<b>HID lamps and ballasts</b>	On average HID lamps and ballasts sold in Egypt are respectively 20% and 15% less energy efficient than the minimum requirements specified in the EU Directive (COMMISSION REGULATION (EC) No 245/2009 of 18 March 2009)	All HID lamps and ballasts sold in Egypt meet the energy efficiency requirements set out in the EU Directive (COMMISSION REGULATION (EC) No 245/2009 of 18 March 2009)
<b>TVs</b>	On average TVs sold in Egypt are 15% less energy efficient than the minimum requirements specified in the EU Directive (COMMISSION REGULATION (EC) No 642/2009 of 22 July 2009)	All TVs sold in Egypt meet the energy efficiency requirements set out in the EU Directive (COMMISSION REGULATION (EC) No 642/2009 of 22 July 2009)
<b>Set-top boxes</b>	On average set-top boxes sold in Egypt are 35% less energy efficient than the minimum requirements specified in the EU Directive (COMMISSION REGULATION (EC) No 107/2009 of 4 February 2009)	All set-top boxes sold in Egypt meet the energy efficiency requirements set out in the EU Directive (COMMISSION REGULATION (EC) No 107/2009 of 4 February 2009)
<b>External power supplies (EPS)</b>	On average EPSs sold in Egypt are 29% less energy efficient than the minimum requirements specified in the EU Directive (COMMISSION REGULATION (EC) No 278/2009 of 6 April 2009)	All EPSs sold in Egypt meet the energy efficiency requirements set out in the EU Directive (COMMISSION REGULATION (EC) No 278/2009 of 6 April 2009)
<b>Standby power</b>	On average products sold in Egypt consume 30% more standby power than the minimum requirements specified in the EU Directive (COMMISSION REGULATION (EC) No 1275/2008 of 17	All products sold in Egypt meet the maximum permitted standby power requirements set out in the EU Directive (COMMISSION REGULATION (EC) No 1275/2008 of 17 December 2008)

	December 2008)	
<b>Room air conditioners (RAC)</b>	On average RACs sold in Egypt are 25% less energy efficient than the minimum target requirements	All RACs sold in Egypt either meet the energy efficiency requirements that are likely to be set out in the pending EU Directive or if such as a Directive is not published for whatever reason have an energy efficiency ratio (as measured according to the ISO standard) that is of >3.0 W/W
<b>Electric storage water heaters (ESWHs)</b>	On average ESWHs sold in Egypt are 8% less energy efficient than the minimum target requirements	All ESWHs sold in Egypt either meet the energy efficiency requirements that are likely to be set out in the pending EU Directive. If for some reason this is not adopted it is assumed that the target efficiency threshold would correspond to the proposal in the draft Directive.
<b>Fans</b>	On average fans sold in Egypt are 20% less energy efficient than the minimum target requirements	All fans sold in Egypt meet the energy efficiency requirements that are likely to be set out in the pending EU Directive. If for some reason this is not adopted it is assumed that the target efficiency threshold would correspond to the proposal in the draft Directive.
<b>Washing machines</b>	On average washing machines sold in Egypt are 15% less energy efficient than the minimum target requirements	All washing machines sold in Egypt meet the energy efficiency requirements that are likely to be set out in the pending EU Directive. If for some reason this is not adopted it is assumed that all washing machines would meet the requirements of the EU energy label class A.
<b>ICT</b>	On average ICT equipment sold in Egypt are 15% less energy efficient than the minimum target requirements	All ICT equipment sold in Egypt meets the energy efficiency requirements that are likely to be set out in the pending EU Directive. If for some reason this is not adopted it is assumed that all ICT equipment meets today's international Energy star requirements.
<b>Electric motors</b>	On average electric motors sold in Egypt are 3.5% less energy efficient than the minimum requirements specified in the EU Directive (COMMISSION REGULATION (EC) No 640/2009 of 22 July 2009)	All electric motors sold in Egypt meet the energy efficiency requirements set out in the EU Directive (COMMISSION REGULATION (EC) No 640/2009 of 22 July 2009)



## Annual Work Plan

Egypt - Cairo

Award Id: 00060162

Report Date: 6/8/2011

Award Title: PIMS 4231 CC FSP: Improv. EE of Lighting&Bldg Appliances

Year: 2011

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
00075645	PIMS 4231 CC FSP: Improv. EE o	Growth of EE Lighting Marke	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	42,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	36,800.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	120,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	100,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	4,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	3,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	10,000.00
		PMU	28/6/10	31/12/15	Egypt Electricity Holding CO	04000	UNDP	71400	Contractual Services - Individ	13,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	8,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72500	Supplies	1,000.00
					Egypt Electricity Holding CO	04000	UNDP	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,000.00
		S&L Scheme4Bldg Applianc	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	40,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	89,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	04000	UNDP	72100	Contractual Services-Companies	50,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	78,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	2,400.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	6,000.00
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	48,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,000.00
Egypt Electricity Holding CO	62000				GEFTrustee	72100	Contractual Services-Companies	30,000.00		



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			Start	End		Fund	Donor	Budget Descr	Amount US\$	
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
<b>TOTAL</b>										<b>883,200.00</b>
<b>GRAND TOTAL</b>										<b>883,200.00</b>



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			Start	End		Fund	Donor	Budget Descr	Amount US\$	
00075645	PIMS 4231 CC FSP: Improv. EE o	Growth of EE Lighting Marke	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	42,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	36,800.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	120,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	50,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	4,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	3,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	15,000.00
		PMU	28/6/10	31/12/15	Egypt Electricity Holding CO	04000	UNDP	71400	Contractual Services - Individ	13,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72500	Supplies	1,000.00
					Egypt Electricity Holding CO	04000	UNDP	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
		S&L Scheme4Bldg Applianc	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	40,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	89,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	04000	UNDP	72100	Contractual Services-Companies	100,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	78,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	150,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	2,400.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	6,000.00
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	30,000.00



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			Start	End		Fund	Donor	Budget Descr	Amount US\$	
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
<b>TOTAL</b>										<b>1,047,200.00</b>
<b>GRAND TOTAL</b>										<b>1,047,200.00</b>





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Year: 2013

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
00075645	PIMS 4231 CC FSP: Improv. EE o	Growth of EE Lighting Marke	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	42,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	36,800.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	120,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	50,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	4,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	3,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	15,000.00
		PMU	28/6/10	31/12/15	Egypt Electricity Holding CO	04000	UNDP	71400	Contractual Services - Individ	13,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72500	Supplies	1,000.00
					Egypt Electricity Holding CO	04000	UNDP	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
		S&L Scheme4Bldg Applianc	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	40,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	89,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	04000	UNDP	72100	Contractual Services-Companies	100,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	78,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	100,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	2,400.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	6,000.00
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	32,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	8,000.00



## Annual Work Plan

Egypt - Cairo

Award Id: 00060162

Report Date: 6/8/2011

Award Title: PIMS 4231 CC FSP: Improv. EE of Lighting&Bldg Appliances

Year: 2013

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	15,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
<b>TOTAL</b>										<b>1,022,200.00</b>
<b>GRAND TOTAL</b>										<b>1,022,200.00</b>



## Annual Work Plan

Egypt - Cairo

Award Id: 00060162

Report Date: 6/8/2011

Award Title: PIMS 4231 CC FSP: Improv. EE of Lighting&Bldg Appliances

Year: 2014

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
00075645	PIMS 4231 CC FSP: Improv. EE o	Growth of EE Lighting Marke	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	12,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	36,800.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	120,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	4,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	3,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	5,000.00
		PMU	28/6/10	31/12/15	Egypt Electricity Holding CO	04000	UNDP	71400	Contractual Services - Individ	13,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72500	Supplies	1,000.00
					Egypt Electricity Holding CO	04000	UNDP	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
		S&L Scheme4Bldg Applianc	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	10,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	40,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	89,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	04000	UNDP	72100	Contractual Services-Companies	50,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	78,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	100,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	2,400.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	6,000.00
					Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee
		Egypt Electricity Holding CO	62000	GEFTrustee				72100	Contractual Services-Companies	15,000.00
		Egypt Electricity Holding CO	62000	GEFTrustee				74200	Audio Visual&Print Prod Costs	1,000.00



**Annual Work Plan**

**Egypt - Cairo**

**Award Id:** 00060162

**Report Date:** 6/8/2011

**Award Title:** PIMS 4231 CC FSP: Improv. EE of Lighting&Bldg Appliances

**Year:** 2014

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
<b>TOTAL</b>										<b>792,200.00</b>
<b>GRAND TOTAL</b>										<b>792,200.00</b>



## Annual Work Plan

Egypt - Cairo

Award Id: 00060162

Report Date: 6/8/2011

Award Title: PIMS 4231 CC FSP: Improv. EE of Lighting&Bldg Appliances

Year: 2015

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
00075645	PIMS 4231 CC FSP: Improv. EE o	Growth of EE Lighting Marke	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	10,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	36,800.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	120,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	4,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	3,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	5,000.00
		PMU	28/6/10	31/12/15	Egypt Electricity Holding CO	04000	UNDP	71400	Contractual Services - Individ	13,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	65,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72400	Communic & Audio Visual Equip	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72500	Supplies	1,000.00
					Egypt Electricity Holding CO	04000	UNDP	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
		S&L Scheme4Bldg Applianc	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	71200	International Consultants	10,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants	40,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71400	Contractual Services - Individ	89,600.00
					Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel	2,000.00
					Egypt Electricity Holding CO	04000	UNDP	72100	Contractual Services-Companies	30,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	78,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	72200	Equipment and Furniture	350,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	2,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	2,400.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	6,000.00
					Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee
Egypt Electricity Holding CO	62000	GEFTrustee	71300	Local Consultants				8,000.00		
Egypt Electricity Holding CO	62000	GEFTrustee	71600	Travel				1,000.00		



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Egypt - Cairo

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Year: 2015

Project ID	Expected Outputs	Key Activities	Timeframe		Responsible Party	Planned Budget				
			Start	End		Fund	Donor	Budget Descr	Amount US\$	
		Sustained Project Results	28/6/10	31/12/15	Egypt Electricity Holding CO	62000	GEFTrustee	72100	Contractual Services-Companies	60,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74200	Audio Visual&Print Prod Costs	1,000.00
					Egypt Electricity Holding CO	62000	GEFTrustee	74500	Miscellaneous Expenses	1,200.00
					Egypt Electricity Holding CO	62000	GEFTrustee	75700	Training, Workshops and Confer	1,200.00
<b>TOTAL</b>									<b>1,105,200.00</b>	
<b>GRAND TOTAL</b>									<b>1,105,200.00</b>	